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## MULREADY, THE ENGLISH GENRE PAINTER.

WE know the modern English painters chiefly by means of the *burin* of the engraver. English painters of the first rank do not so frequently duplicate their works for American picture-buyers as the French painters, and their best works are but seldom sold out of England. While we know most of them as story-tellers and as draughtsmen, by means of engraving.



CROSSING THE FORD. From a Painting by W. MULREADY.

ings after their works, we hardly know any of them (and none of them adequately) as *painters*. Perhaps there is not one American, who has not resided some time in England, sufficiently acquainted with the *paintings* of Millais, Holman Hunt, Mulready, Calderon, Orchardson, Martineau, Marks, Hughes, and Rossetti, to speak with any confidence and fulness of expression about them. We must, therefore, rely upon the judgment of English and French critics concerning English painters. Mulready, one of the most distinguished, one of the least eccentric of modern English painters, is known to us only by means of a few admirable engravings after his works. We know him best by the report of the art-critic of the *Saturday Review*, by the lithograph of his "Sonnet," and the steel engraving of "The Wolf and the Lamb." Both these pictures are remarkable and delicate works, showing a fine mind and a tender heart. Mulready won the admiration of the best men in English art and criticism—Palgrave ranking him with Flaxman and Ingres, and Ruskin paying a high tribute to his fine and correct design, by saying that his dogs might have been types for Hellenic coinage. His drawing was uncommonly refined and beautiful; and one of his pictures, entitled "The Whistonian Controversy," is said to be the most gorgeous piece of color, united with perfect drawing, produced by the modern English school; and another, called "The Bathers," is said to be almost the only English picture which can be fairly matched with Ingres's work. We are repeating the language of a critic who chooses his expression, who is judicious, and well acquainted with his subject.

Mulready was born in Ireland, in 1786; he studied at first under Banks, the sculptor; to this training of his sense of *form* may be traced his fine and pure "line," which probably suggested the comparison between his work and Ingres's, the more famous Frenchman. Mulready next studied landscape-painting, and distinguished himself by a picture called "The Gravel-Pit," afterward, turning his attention to figure-painting, he was first obviously influenced by Jean Steen, and later by Wilkie, the Scotch painter; but he is said to have been superior to Sir David White "in technical skill and thoroughness as an artist." We cannot do better than give Palgrave's estimate of his final characteristics as an *artist*, who says:

"If Mulready's earliest aim in his figure-subjects was humor, in his later it was grace. In its essential purity, no English painter can, we think, be set above him. Great as are the claims of Reynolds, Gainsborough, Stothard, and Leslie, none of them equalled Mulready in that refined accuracy which has been noticed as his primary characteristic. In mastery over design, no artist, we imagine, would hesitate to rank him as the highest; and he was thus enabled to give a fuller expression to his sense of the beautiful." The same critic, speaking of Mulready's pictures painted between 1839 and 1849, as his most consummate works, mentions "The First Love" as "perhaps the most purely, tenderly, and poetical of English pictures from common life."

It remains for us to give the titles of his more celebrated pictures: "The Dog of Two Minds," "The Toy-Seller," "The Travelling Druggist," "The Fight," "The Last In," "In the Seven Ages," "The Bathers," "The Rattle," "The Wedding-Gown," "Crossing the Ford," "The First Bite," and "Shooting the Cherry." Mulready also illustrated an edition of "The Vicar of Wakefield," and painted several pictures illustrative of the same work. But Mulready generally found his subjects in life and Nature, and not in books; in this respect he differed from the less masculine but equally delicate humorist, Leslie. Even from our inadequate acquaintance with the works of Mulready, we can have the confidence to say that he is one of the few painters of the world who has painted boy-life without the least vulgarity; that the broad *grin* never had any place in his works; that he appreciated the delicacy and sweetness, and humor of the incidents of the life of children; that he felt and saw both the beauty and poetry, and not less the dramatic element, in

the life of schoolboys and girls. Mulready had a fine and cultivated sense of beauty, without the least suggestion of the voluptuous, which seems inseparable from the Frenchman's conception of the beautiful. Nothing in Mulready's *girl*, as in Grenze's, which would have set the discursive and carnal mind of a Diderot rambling in such a piquant and provoking fashion. Finally, again, to take the word of an English critic, Mulready was "a noble student" throughout his whole artistic career, "never content to stay his hand at a point of skill already reached, but pressing on to further excellence;" hence the absence of self-repetition, hence "his constant struggle onward," hence his excellence as a painter of sentiment, as a delicate humorist, as a pathetic and idealizing illustrator of the actual of common life. As a painter, Mulready was not unlike Goldsmith as a writer; fellow-countrymen, yet both naturally, and without effort, avoided what is called "the broad Hibernian element."

Mulready having been a refined and accurate artist, "combining accuracy with refinement," was never a *popular* artist. One of his finest pictures, "The Toy-Seller," although "it might have been bought for a very moderate sum, like Turner's 'Téméraire,' left the Academy exhibition still in the artist's possession." Palgrave says "England was probably not the country where he could be best appreciated;" that "an Athenian tribunal is required for men like Mulready, Ingres, and Flaxman."

We may add that Flaxman's works are appreciated by the same public that honored Ingres's—that in France there has always been a public capable of enjoying the fine and the graceful. But popularity is seldom the reward of a fine and graceful talent. What is subtle, what is exalted, what is not obvious, addresses itself only to cultivated, or naturally refined perceptions. It is the business of the judicious to correct the verdict of the obtuse many; it is the function of the enthusiastic to carry a little warmth to the struggling, and at times languishing talent of upright and modest workers in art.

However, that our understanding of Mulready, for example, may not be entirely dependent upon English opinion, it is worth while to say that Ernest Chesneau, an average French critic, classing Mulready with Leslie, and Ullstone, and Newton, said that he was "a truthful observer and a *mediocre painter*." But Mulready was more than a truthful observer; he had the feeling of a tender and domestic man for the best of what constitutes the social life of Englishmen—but he differed from great painters, as most every English artist differs from French or Italian painters, in using his art as a *moral* means; the picture must have a story to tell; in other words, the subject was first, and the expression never studied and practised as a thing of beauty sufficient unto itself: like our own Longfellow, like Tennyson, a little ethical teaching was embodied in his finest works, and the ethical teaching made more impression than the *art* of the artist. So long as this is so, the average of expression or style must be less beautiful, less delightful, than the average sentiment or meaning. Even in Mulready's works, fine and thorough artist as he was, we infer that he was a finer and more thorough moralist. Never transcendent, nor exceptional, but always gentle, and pure, and social, he must be classed with the men of home-sentiment, with the fine and sweet humorists who wrote unimpeachable stories and essays cherished in the family life of our modern society—Addison, instead of Montaigne; Thackeray, instead of Pascal; Richardson, instead of Diderot.

"With regard to the personal character of the man," says a biographer, "it may be well to add the testimony of the writer, who often sat beside him in the life-school at the Academy, to his undeviating kindness and consideration for the insufficiency of others. The man whom all respected as an artist should become the personal friend of many, was due, in Mulready's case, much less to his remarkable talent than to his way of treating all with equality and friendliness. When this man drew, as he had done for more than sixty years, in the



THE FIRST BITE. From a Painting by W. MULREADY.

schools of the Royal Academy, he had by his side the latest-admitted draughtsman who had proved himself capable of deriving benefit from study of the living model. The youths of twenty and the men of seventy, a world of time and thought lying between them, occupied the same bench, and drew from the same model. In a quiet, unostentatious way, the 'visitor'—such is the title of the Royal Academician who in his turn has charge of the school—would rise from his not too soft bench, and pass round from student to student, advising each, and, with the greatest courtesy, correcting the drawings they produced. A man proved by his reputation to be capable of teaching, never fails to have a large number of pupils; consequently, 'Mulready's nights' at the Academy were fully attended, and eagerly inquired for long before they came about. His industry was thorough, his life a long education. He drew in the life-school so late as a few evenings before his dissolution, and had for pupils on that occasion the grandchildren of some of the contemporaries of his own youth."

He was a knight of the Legion of Honor, made so in acknowledgment of the merit of his pictures sent to the *Exposition Universelle*, at Paris, 1855; it is said he would have received the gold medal for English exhibitors, if the French critics had had their way. The English voters awarded it to Sir E. Landseer. He died suddenly, Tuesday, July 7, 1863.

## TWO LIVES DISCOVERED.

THE shopman who waited on Parke Brested seemed a little curious to discover what he meant to do with the materials he was purchasing. It was, indeed, not among the likelihoods that he was buying for himself. He had not the look of a workman, and he bought too freely. Any artist, or any wise art-student, would have been more discriminating and cautious. Parke was lavish as ignorance, and he talked more than men are wont to talk who have a serious will and solid plans.

Two or three questions, adroitly asked, placed the dealer in possession of these facts: that the young gentleman had lived many summers by the sea, and that he was preparing to go to the coast again, and, moreover, that he intended to make a few sea-sketches. He had seen several fine marine views, which were attracting great admiration, and had suddenly formed the opinion that it must be a fine thing to be an artist.

The dealer had heard in his time a great deal of talk like that, and, as he was getting to be an elderly man, it did not amuse him as it might have done when he was younger; for his observation and experience had instructed him thoroughly in the meaning of life, and he knew that existence would never leave a man unchallenged—he must show how much of real service he had performed in this life, before he would be allowed to pass with the badge of honor out of it. So often had he seen the requirements met by ignominious incapacity,



that he felt, as it were, called upon to warn, directly or indirectly, any youth who came in his way, giving evidence that he had no adequate conception of his business on earth.

This youth now before him exhibited signs of wealth—gave evidence that he had lived at his ease. He was about to amuse himself merely, it was likely, for a summer, by work which would probably prove in the end less profitable than positive idleness. There was no time to be lost; and so, saying, "I would like to show you two little sea-pieces which I have on exhibition," he led the way into a small gallery in the rear of his shop. "There," he continued, pointing to companion-pieces, which showed the ocean in storm and in calm, "there—that's what I call perfection. If you are going to paint marine views, don't stop short of that. The sea is all there—the vastness, depth, color, magnificence, all within a foot and a half. I will undertake to sell for you as many pictures, good as that, as you can paint, for a thousand dollars apiece. But, by the time you are able to execute in like style, you will be half a fish yourself. You will have to live in the sea, almost."

A customer called the shopman away in the midst of his talk.

Parke went down to the sea-house, in consequence of his purchase of that particular dealer, with these points clearly defined, at least so far as words could define them: he was to study the ocean in its vastness, in its depth, in its color, in its calm and its stormy aspects. He had his father's far-seeing eyes. What should hinder his doing what he had determined to do? And to think of one thousand dollars for one foot and a half of canvas! He could paint twenty pictures in a season, easily, and all unlike. "Take any twenty days by the sea," he said, "and you will have twenty different aspects." Twenty thousand dollars for a summer's work!

No wonder Parke found it difficult to keep his secret, as he set out for the coast with his mother, who was so troubled in these days, since it was ascertained beyond a doubt that the mines, for which his father, the captain, had exchanged the most valuable part of his property, had turned out quite worthless. And no wonder that, when his uncle said to him, with rather stern intent, though the words, as spoken, had a jocular sound—"I will give you till fall, Parke, and then, if you don't make up your mind to stay with me, we shall fall out, I'm afraid!"—he was tempted to reply, "To China with your tea-trade! I prefer to deal in the native products, and, with twenty thousand dollars per annum, won't ask any favors." But he wisely kept his own counsel, and even reserved the great joy for his mother by maintaining silence for the present.

His uncle had become so impressed with a sense of the evil the youth was deriving from this long lounging around, that he would even have discountenanced that month at the sea-house; but he could not find it in his heart to expostulate with his poor sister, and it did, in fact, seem necessary that somebody should go down and set the place in order, for the Wagrams were to take possession for the summer on the 1st of May. It was natural that Helen should wish and expect Parke to accompany her, and, indeed, it might be that she would have need of him. But it was very evident to the old gentleman that the boy was getting no good, but a great deal of harm instead, by his haphazard, indolent way of picking up information and acquiring knowledge in regard to a thing so serious as life.

To the sea, therefore, they went together—the widow of Captain Brested, and her son.

And so it was that, while Parke—who had all his father within him, except his father's will, and all his father externally, except that something which human beings feel and recognize as consciousness of power—stood on the northeast corner of the piazza, which extended around the house, and looked up the coast of barren, white sand-hillocks, and out upon the sea, or moved along to the south end, and gazed on the sandy bluff, and the soft greens of grass, and the dark hues of dwarfed cedars, and the white sand, and the daily-changeable beach-lines, and the sea, and the ships—while he studied, and was absorbed, apparently, beyond power of distraction, and persuaded himself that he had found his vocation because the novelty of the study could not wear away in one month of such changeable skies and seas as April gave him—little Oliver Wagram was getting to be an almost vexatious question in his uncle's house. Of course, anybody who knew the family might have predicted that, when they came to make the removal from Fourth Street to Sea-House, Oliver would accompany them; but, nevertheless, the question must be discussed now, as with every occasion—what was to be done with him?

The lad was an orphan, and, luckily, not poor, but the heir to a fortune which forbade his being regarded exactly as an encumbrance, though it would seem that any thing that suggested other thoughts than those of ease or of beauty, must be considered an encumbrance by the mother of the Wagram children.

From his birth, Oliver was a misshapen boy; and he was every way awry—so it was said. But, how far this criticism found in itself its verification, might well be asked; the boy was sensitive in spirit, and getting to be wretchedly so in regard to his person. He had begun to shrink from observation, and to wonder if others perceived in him what his aunt saw, and what he himself saw. His impulse was, to skulk away out of sight on every occasion, when it was the least probable that he would attract observation. Poor child! how he suffered from the want of that motherly tenderness which would have covered him as with a cloak, and surrounded him with an atmosphere, warm with love, through which to look into human faces!

But perhaps there was a suggestion of tenderness in the kind of management to which he was subjected. Possibly he was treated with a roughness little short of cruelty in order that he might the better be able to meet what the world had in store for him with indifference. It is easier to think so than that out of cruel hearts had leaped the impulse to confuse, distract, and distress a child. No wonder he had come to consider himself a sort of pariah, to be treated, if he came in the way of pitiful hearts, with a kindness as unwelcome as contempt or scorn.

Nobody, as yet, taking him by the hand, had led him to Labor, and said, "Here is thy son; train him in the way best pleasing to thee. He will love thee for the service thou requirest."

This was the one great thing that could be done for him by a mortal. There was no blessing but that which would consecrate him to some noble work, that could save the life of little Oliver Wagram from perpetual sorrows.

How impossible it was for the boy to imagine that the decision to rent the sea-house was a matter of moment to him! He might, indeed, gain a little strength from the sea-air, and, in constant view of that living beauty, the pallor and pain might in a measure be withdrawn from his features; but, at the most, this advantage seemed likely to be all. So it is! That day and hour which shall give resurrection, regeneration, salvation—no man knoweth.

But, little Wagram, sitting on the trunk ready for the cartmen, rejoice that you are going out of Fourth Street to look upon the Atlantic Ocean from the grand piazza extending seaward, over which Captain Brested walked once, as he walked his double-decker on the deep, in the joy of his manly heart. You, who have never had a friend, are going to find Parke Brested.

Yet think of it—that vacillating, not a little vain and selfish fellow—is it really a matter of congratulation that Oliver shall find him by the sea? He is to find a friend. Where is that heroic saint, or that sage, who will willingly consent to be gazed upon by eyes that look not on him with something less than the keen searching of thought bent on scientific exploration?

The Wagrams came, and they found the sea-house in order. The captain's widow had retired with her son to the farm-house inland, and Parke was now daily making excursions to the coast, that he might there continue the studies which had been so provokingly interfered with by the arrangement which drove them, as one might say, out of their house. *As one might say*—Parke knew better than to say it. His uncle had said enough to show him that his father's estate was not in the condition which his father, dying, had supposed. He knew that the bequests made in the last will and testament could only be paid at frightful cost—a cost that would almost impoverish his mother. But he knew, too, that she had determined that they must be paid, if it exhausted the value of the estate. She had health, and her hands, and the truest womanly pride; and she revered the memory of her husband. Knowing this, Parke made no complaint at the turn affairs had taken under the inspection of executors; but he did allow himself, when they had retired to the farm-house, to show a face on which the hope of youth was clouded by discontent and discouragement. It was evident that he was to be greatly distressed, if not terrified, by the prospect before him. This fact, so apparent, disturbed his good mother, as may be supposed. She did not dare to talk with him, as she would have liked to talk, in regard to those bequests. She was afraid that he might demur, and in this way, if in no other, dishonor the name he bore.



One day, as he was putting off from the point in his boat, intending to go farther up the beach, and spend the day at some place favorable for study, Parke saw Oliver Wagram on the shore, watching him, while he made his preparations, with serious eyes. He knew that the boy belonged to the family now occupying the sea-house. Already he had spoken to him once or twice, and, as he was about to push off, he called to him, and asked if he would like to go along. The boy answered by a spring, both arms extended. "Come on, then," said Parke; and he excused himself for inviting a companion into his solitude by saying that he would not be interfered with in the least by the company of that little whiffet. He was going to study the waves and the surf, and would bring back with him evidence of a long and a successful day's work.

But, as he rowed along, Parke talked with Oliver, and found in himself the object of the lad's admiration, as he so easily delivered his strokes. That did not displease him. He liked to meet the gaze of those large, mild, brown eyes—only they were too sad.

All at once, as he was about to draw the boat ashore, he thought, for the first time, that possibly some anxiety might be felt by the boy's friends in his absence, and he said:

"It's odd I have brought you down here—nobody knows where you are."

"That's no matter," said the boy, as if he thought it might even be a good thing if some anxiety could be excited in regard to himself.

"Ah! but if they get alarmed at the house?"

"Nobody gets alarmed about me. I always stay out as long as I wish, and go where I please."

"Well, in that case, I can make myself easy. I have come here to study awhile; you may pick up shells, or lie down, or continue to do as you say you are in the habit of doing—what you please."

"Well, sir," said the boy; and he walked off a short distance, climbed a sand-bank, which was crowned with green, and sat down there, facing the sea. Beneath him were flocks of pretty snipe, playful as children, hopping along the sand, running before the waves as they came in, and plucking from them what they would or could.

It was a barren spot—rich only in beauty.

Parke sat down to his work, and Oliver never once approached him. He was in the happiest mood—indeed, he almost dreamed that he had found a friend in the handsome young gentleman who had so kindly brought him here. Oh, that these hours might last forever, or that he might die here!

He was dreaming, with his eyes wide open, and the sounds of the sea in his ears, when Parke called to him. It would have been impossible for him to say how long a time had passed; but it was getting dark. It was the clouding sky which had changed the aspect of things, and made him think that day might be waning. Descending quickly from his perch, he ran down to Parke, who stood looking at the sky rather doubtfully, though he spoke with a good deal of assurance—

"We can get back first, I think; but we shall have a storm before night."

Oliver said, "Yes, sir," and looked rather pleased; nothing could come amiss, certainly, on such a day as this.

"Can you row?" asked Parke; and then he seemed to be ashamed that he had asked, for he laughed at himself, and took up the oars with quite an air, and hoped that he had not betrayed what he was thinking; for, in fact, he felt uneasy, and assured himself that it would be a good thing when they were safe within the point lying behind the bluff. As he took off his coat and folded it, he was less conscious of the gaze of those brown eyes than he had been before. There could come a time, it appeared, when even admiration could fail to engage the thoughts of Parke Brested—one might have supposed that the world must first come to an end.

The wind was in his favor, and yet, though he made tolerably good progress, a shadow began to pass over Parke's face as he rowed on, a shadow which the little being opposite him began to feel—it was as if the sun were about to be eclipsed. But Parke was thinking, "I never was caught in a scrape like this before; the Lord only knows what would become of us if a squall should happen to hit us."

That was exactly what did happen, as they neared the point. The wind came down on them like sudden wrath, and then, in his right hand, Parke held a broken oar, and in a second the boat was half filled with water. Little Wagram's hat blew off, and Parke, making frantic

efforts with his single oar to guide the boat, saw him sitting there with a face pale as death, yet illuminated by a light of exultation and of joy. Rising from his seat, and holding to the edge of the boat, the next moment he came creeping close to Parke, and said:

"We can't get in, sir—can we?"

"What is the boy made of?—he's crazy," thought Parke. "I never can save myself and him too. It will be a miracle if he isn't out of this world in less than ten minutes."

"We must try," he answered aloud. "I will do all I can."

"Don't mind me, sir," said Oliver. "I'll keep hold of this, and maybe—"

He had a part of the broken oar in his hand; he was going to sit down again, holding it, when the boat capsized.

Parke could swim. He did not lose his presence of mind; he knew that his life depended on his coolness, and he thought of the ten times his father had been wrecked, the instant he found himself among the waves. In a momentary lull he saw that the shore was near, and he promised himself he would reach it. Just then he noticed little Wagram again, and his heart smote him, for the boy was struggling among the breakers, and that strange look which had in it no appeal, no fear, had not yet entirely disappeared from his face. There was a struggle in his mind. How long it lasted, he could never have told; but it was sufficiently defined to compel a choice, and he chose. He would take the boy to shore with him—dead or alive, they would go in together. Ah, at what a moment the test was given to Parke Brested, and the decision compelled! He might so easily have given himself merely to the business of saving his own life! might so easily have proved a coward!—and he did not.

They did come to shore together; the great waves tossed the boys upon the beach, both of them; and, as it chanced, linked together, somehow they were thrown among the debris of a vessel wrecked on the coast years before, and the ruins kindly detained them when the billows receded—neither of these waifs had any consciousness by which to seize hold of helps to life.

Parke first revived and looked about him, and made the discovery that his right arm was broken. Several minutes passed before Oliver's eyes opened, and Parke greeted him with a burst of laughter, so perplexed he looked, and so long he was in discovering what had happened to him, and where he was.

"Here we are," cried Parke. "How are you? Have you enjoyed your nap?"

Oliver sat up and looked around him. "You have saved my life," said he; "I'm going to stay with you."

"Yes," answered Parke, still speaking in a very lively voice, "you'll be my man Friday, and we will take possession of this desert island. Afterward we'll try to make our way home, and get our bones set, and dry clothes on them."

At that Oliver stood up, and seeing that Parke was holding his right arm very carefully, he said: "Are you hurt, sir?"

"Something has happened which will keep me quiet the rest of the summer, I reckon," answered Parke.

"Did I catch at your arm when you swam near me?"

Parke did not answer for a moment, and then he said: "I don't know. I guess not."

"I did!" said Oliver. "I tried not to, but I couldn't help it. That's what you got by not letting me go."

"We won't talk that silly way," said Parke. "I'm glad, for one, that I'm on shore, and able to find my way home again. No grumbling, if you please. You will have to go with me. You can't wade across that inlet as you could have done this morning. See how the waves are tearing in! Come home with me, and I'll have you taken over to the house."

"You needn't mind about sending me away from you, sir," Oliver thought, as they walked together across the sand toward the road which ran behind the bluff, and along the stream, and so among the farm-lands. He did not say it aloud, but afterward, when he found himself in the spring-wagon going toward the sea-house, one of the farm-hands driving at full speed, for Mrs. Brested, of course, understood well the anxiety and even alarm which would be felt on account of the boy's absence in the storm, he wished that he had spoken out, and not allowed himself to be sent away from the only place on earth where he had ever felt at home.

At the sea-house, this adventure with its quite serious consequences—for Parke's broken arm was a circumstance to make much

of in the circle of the young Wagram's—was considered to have its decided advantages. It held its own warning. Oliver was the hero of a most unenviable experience, and the effects of excitement and exposure on his poor little body were such that the children of the family were quite impressed, and fancied for the time that they would never dare to trifle in their sport with a power so undeviating in claiming its prerogatives as the Atlantic Ocean.

When Oliver and Parke met again there was a prophecy of warm friendship in the way they greeted each other. They had embraced each other in the extremity of danger—in the felt presence of death. Was there any thing beneath the sun, any thing in life more fierce which they could encounter?

Parke disabled from work was at liberty to suppose that he might have made any imaginable degree of progress during the summer. He believed that Oliver's life had cost him this opportunity of proving how much of the artist there was in him—and who would venture to say how many years of twenty thousand dollars' income! He had bought that life which seemed indeed to recognize itself as somehow belonging to him—and was happiest when near him. Parke had not been without friends all his life. The love of this boy was not an experience so rich and so new that he could be surprised by it into an undue valuation thereof. Still he could not find it in him to say, or to feel, that he had gained nothing, while losing so much.

One day they happened to be on the beach together, and while looking out on the blue sea so bright in the sunlight, so tranquil in the calm, they talked of the storm which had wrecked them, and, as well, hundreds of masted vessels all along the coast, and Parke found himself saying:

"But for that I should have been making studies of the waves now, from morning till night. That was what I intended to do with this summer."

"Could you paint the sea?" asked Oliver, looking as surprised as if such a possibility as that any one should paint it had never before occurred to him.

"Perhaps not—but I intended to try;" and then Parke felt that he had betrayed himself, and exhibited his lack of generosity, and he looked accordingly.

And now must this loving boy proceed at once to ascertain, in one way or another, and never rest until he had discovered, whether he indeed could be worth as much to any mortal as this summer had been in anticipation to Parke Brested.

"What will you do now?" he asked, shyly.

"Oh, I shall go into the tea-business, I suppose. My uncle is about tired of recommending it to me—but I shall stay here through the summer just as I intended, though I can't use my arm."

"I am always in somebody's way," sighed poor little Oliver.

"It would have happened just the same with you here, or a hundred miles off," exclaimed Parke; that sigh and those words were more than he could stand. "I was going out, as you know very well, when I saw you and invited you to go along. I am glad you accepted my invitation; if you hadn't, we might never have got acquainted at all."

"Then I'm glad," said Oliver. "And perhaps I can paint for you!"

He looked eager enough to be capable—if desire could only supply faculty.

"Perhaps you can," said Parke, in jest—yet the words were spoken gravely. He could not speak in any other way with the grave face of that boy before his eyes. "I would like to see you doing what I would have liked to do," he continued, in a different strain. "My hands might have come short of it—and indeed I suppose they would have come short. But now tell me—what do you see out there?"

Instead of answering, the boy, from a steadfast gazing, hid his face between his knees to conceal the agitation it betrayed, and the tears in his eyes. A feeling of ownership surprised the soul of Parke—it lifted him up with a lofty sense of possession. He touched Oliver's shoulder gently. "Tell me," he repeated.

"I see nothing that I could manage," said Oliver. "You are the one I would like to please best. I thought I had a hard time of it to please others before—but that would be easier than to do what you ask. You might as well ask me to make the ocean."

But Parke did not believe what his ears heard. He began to feel

as his father must have felt many a time—something of that determination which no obstacle could daunt.

"You don't see any forms, then?" said he. "You don't see any color? You don't hear any thing that colors could describe? It's a little box of a place out there—an acre or two of water—what you might call a water-let!"

Oliver lifted his face again, and his eyes scanned the vast expanse before him. It was a gaze that took in infinity, or that was, rather, absorbed in it; a gaze that saw, too, the little shells of lovely dies which the great waves had laid upon the sand. "I can take the time to do any thing," he said slowly, looking at Parke. "Nobody wants me for any thing in particular. I wouldn't be in anybody's way here. I don't mind trying for you. Perhaps I'll do better than you think, and paint you the sea."

"Then you shall have my colors!" said Parke. "Walk home with me, and I'll give over every thing to you that I bought in preparation before we came down here. If I conclude to try again some time, I'll let you do the same thing for me. But you must promise to keep your secret, and not let anybody see the pictures besides me. That was what I was going to do. Then I meant some day to take a specimen, and go to some marine painter, and ask him to judge my work. I intended to discover what I could do with my own eyes, without saying 'By your leave' to anybody."

"I shall do as you would have done," said Oliver; and he walked home with Parke, and carried away with him the helps to work which he needed, repeating as he went, "size—color—sound—shape," as if fearful of forgetting the four things he was to study in the new work which he was going to undertake for his love's sake.

And what have I suggested here? That love creates faculty? No! but that it may be the acutest discoverer thereof! As to the creation—we will not touch upon that.

Be persuaded that Parke Brested never carried into the dealer's shop a bit of canvas measuring one foot, more or less, to claim his thousand dollars. He went instead, into the tea-trade, with the encouraging consciousness that, by so doing, he would at least be able to pay forthwith for the clothes he wore and the food he ate, and not stand an embarrassing obstacle in the executors' way when they would proceed to carry out the captain's wish, in appropriating funds for the bequests.

Be assured, moreover, that, as time passed on, he found himself less and less capable of counting among his losses that of the summer in which he sat, as it were, at the feet of the boy whose life he had discovered for him. And shall he not rejoice when he sees in those grave eyes the sweet light of love—in those sad eyes the bright evidences of success?

The sea-house, built upon the sands, and called the Captain's Folly, has been swept away by the floods; but the honor of the old captain, which in his lifetime stood on a firm foundation, unmoved by whatsoever storm of fortune, has been verified in the manly integrity of his son.

Honor, health, and wealth to Brested and Wagram! and a gale of fortune to all poor souls for whom LIFE has not yet been discovered!

## THE THREE BROTHERS.

A NOVEL.

BY MRS. OLIPHANT, AUTHOR OF "THE CHRONICLES OF CARLINGFORD,"  
"THE BROWNS," ETC.

### CHAPTER XXI.—WHAT THEY THOUGHT OF IT IN THE SQUARE.

FORRESTER went back very full of his discovery, and there was a certain solemnity in his manner which made it evident to his master that he had something to tell. When he had delivered Laurie's message about the dinner on Saturday, he paused, with a look of meaning. "And glad he'll be of a good dinner, too, sir," the old man said, solemnly, "before all is done."

"I am sorry to hear that, Forrester," said Mr. Welby. "He must have been extravagant; for, after all, though it's a change to him, a man need not starve on two hundred a year."

"It's not now as I'm meaning, sir," said Forrester, with a sigh. "He's been and started in a bad way. For aught I can tell, he's as well off as you and me now; but I know what it all comes to, Mr.

Welby, when a young man sets himself agoing, and won't hear no advice—in that way."

"God bless me! you don't mean to say the young fellow has got married?" said Mr. Welby, with agitation; for his interest in Laurie was great.

"No, sir," said Forrester, "worse nor that. Marrying's a lottery, but sometimes a wife's a help. You may shake your head, sir; but sometimes she's a help. It's more nor that; but I won't keep you no longer in misery. That young gentleman, sir, as you take an interest in, and I take an interest in, and the good lady up-stairs—though he's been well instructed and had all our advice, and ain't an idiot, not to speak of, in other things—he's been and took up the Saxon line. I see, with my own eyes, a sketch of that ere blessed Hedith as is always a seeking somebody's body. He's got it stuck up on a big canvas six by ten, sir; you take my word; and you know what that comes to as well as me."

"Bless my soul!" said Mr. Welby; and though his emotion took a different form, it was quite as genuine as Forrester's outspoken despair. He took a few turns through his studio, repeating this disclosure to himself. "The Saxon line!" he said, with horror. Infatuated boy! When a young man is thus bent on destroying himself, what can any one do? "You are sure you are making no mistake?" said the R. A.; "it was not some other fellow's canvas that had been left in his place? And what did you say to him? After all the trouble we've taken! I will never interest myself in any young man again," said Mr. Welby, with effusion—"not if I should live a hundred years!"

"What did I say, sir?" said Forrester. "I told him plain where he was going—to destruction. I gave him a piece of my mind, sir. I spoke to him that clear as he couldn't make no mistake. I told him the times and times I've seen it done, and what followed. I counted 'em over to him—Mr. Suffolk and young Mr. Warleigh and—"

"Then you behaved like an ass," cried the R. A., with indignation. "Suffolk! the cleverest painter he knows. Why, there's not a man among us can hold the candle to Suffolk for some things! Why didn't you tell him of Baxter and Robinson and Simpson and half a dozen other young fools like himself? Suffolk, a man of genius! I thought you had more sense."

"He may be a bit of a genius," said Forrester, standing his ground; "but he don't sell his pictures, and Mr. Renton knows it. He was struck all of a heap, sir, when he'd heard all I'd got to say. I don't approve of the subject, nor I don't approve of the size; but, as far as I could judge of the chalk, it wasn't badly put on. I wouldn't say he's a genius, but he's got a way, has Mr. Renton; and always a nice-spoken, civil gentleman, even when he's put out a bit, as he might have been to-day."

"Pshaw!" said the master; "that means, I suppose, that he did not kick you down-stairs. Foolish boy! after all I said to him. I dare say some of the women have put it into his head to go and distinguish himself. Go up and give my compliments to Mrs. Severn, and I'd like to speak to her if she is not busy; and mind you don't say a word of this. Don't speak of it anywhere. I hope what you've said to him, and what I shall say to him, will bring him to his senses. Don't say a word about it to any soul."

"I've been trusted with greater secrets," said Forrester, with dignity. "He'll tell her, sir, as fast as look at her; and he'll build more on her advice, though she don't know half nor quarter. I'm agoing, sir. He thinks a deal more of what she says than of either you or me."

"Insufferable old bore!" Mr. Welby said to himself. "Outrageous young ass! It must be those silly women that have bidden him go and distinguish himself. And what have I got to do with it, I'd like to know?" The truth was, the academician had begun to take a greater interest in Laurie than was consistent with his principles; and he wanted to blame somebody for his favorite's rebellion. He put down his palette, for he was at work at the moment, and washed his hands, and prepared for the interview he had asked. Perhaps Mr. Welby was doubly ceremonious as a kind of protest against the ease with which other members of the profession penetrated into the padrona's studio.

"A lady is a lady, however she may be occupied," the old man said. And, in accordance with this principle, Forrester's mien and voice were very solemn when he made his appearance up-stairs. "Master's compliments, ma'am, and, if you're not busy, he'd like to speak to you," he said, standing ceremoniously at the door.

"Mr. Welby, Forrester?" said the padrona. "Oh, surely I shall be glad to see him. I hope there's nothing the matter. Come in and tell me what you think of this. I hope there's nothing wrong."

"No, ma'am, not as I knows of," said Forrester, with profound gravity. "I don't know what else could be thought of it, but that it's a sweet little bit of color, ma'am. You never done nothing finer nor that flesh. It's breathing, that is. Miss Alice called me in to have a look at it before you came down."

"Miss Alice is always an early bird," said the padrona, pleased. "I'm glad you like it, Forrester; but I don't think I've got the light quite right here. Tell Mr. Welby I shall be glad to see him; but you look horribly grave, all the same, as if something had gone wrong."

"No, ma'am, nothing," said Forrester, with a glance over his shoulder; "only about Mr. Renton, as we're afraid it is a bad way."

"Good heavens! Laurie! What is the matter with him?" cried Mrs. Severn. The old man shook his head in the most tragical and desponding way.

"Master will tell you himself, ma'am," Forrester said, withdrawing suddenly out of temptation, and closing the door behind him. The padrona did not know what to think. Laurie had not been visible for a week at least in the Square; but even a young man, with all the proclivities toward mischief common to that animal, cannot go very far wrong in a week. She, too, prepared for the impending interview, as Mr. Welby was doing. She put away all her working-materials, and set the big Louis-Quinze fauteuil near the fire for her visitor. She even went so far as to put a sketching-block on the table, and sat down before it with a pencil in her hand, posing half consciously, as an amateur might have posed. The padrona, though she was not timid in general, was a little afraid of her tenant. If she left her picture on the easel, it was because there was no time to get it comfortably smuggled away, and some inarticulate beginning placed in its stead. She turned the Louis-Quinze, however, with its back to the easel, by way of security. A word of approbation from old Welby was worth gold; but yet the risk of obtaining it was one Mrs. Severn did not care to run.

A few minutes after he tapped at the door, and came in, taking off the velvet cap which, as he knew very well, had such a picturesque effect on his white hair. The moment he entered the room the padrona saw how vain had been her precaution in turning the Louis-Quinze chair. He glanced round him with the quick artist-eye which sees every thing, and went up to the easel, of course, as politeness required, and delivered his little speech of courteous applause, under which Mrs. Severn discovered not a word of criticism, such as her usual visitors threw about so lightly. "I don't think I have got the light quite right here," she said, as she had said to Forrester, but with alarm in her face. "Indeed, I don't see what there is to find fault with," Mr. Welby answered, with his old-fashioned bow. Nothing could be more sweet or more unsatisfactory. The padrona almost forgot poor Laurie, as with a flush of vexation on her face she indicated to her visitor the Louis-Quinze chair.

"I hope you are not over-exerting yourself, my dear madam," the old painter said. "I am struck dumb by your energy. Where I produce one little picture, you exhibit half a dozen. I admire, but I fear; and, if you will let an old man say so, you must take care not to overwork your brain."

Tears sprang to the padrona's eyes; but she kept them fixed steadily on her block, so that the old cynic, who, no doubt, knew all the commonplaces about women's tears, should not see them. She said, with all the composure she was mistress of, "You and I are very different, Mr. Welby. Your one picture, of course, is more than worth my half dozen; but one must do what one can."

"No one knows better than I what Mrs. Severn can do," said the R. A., with one of those smiles for which the padrona could have strangled him. "I was but taking the privilege of my age to warn you against overwork, which is the grand disease of these times, and kills more people than cholera does. Pardon me. I want to speak to you about young Renton, in whom I know you take an interest. I advised him," Mr. Welby said, slowly, "to give up all idea of producing anything for the moment, and to devote himself to preparatory work—hard work."

"So he told me," said the padrona, with a little spirit; for there was no mistaking the implied blame in old Welby's tone. "And so I told him, too."



"Then somebody has been undermining us, my dear madam," said the R. A. "Somebody has been egging up the foolish boy to make a name for himself, and win fame, and so forth. Forrester brings me word that he has begun a great picture—high art, life-size, Edith finding the body of Harold. The young fellow must be mad."

"Edith finding the body of Harold!" repeated Mrs. Severn, bewildered; and then, what with her personal agitation, what with the curious anti-climax of this announcement after her fears about Laurie, the padrona, we are obliged to confess, burst into a sudden fit of nervous laughter. She laughed till the tears came into her eyes; and, to be sure, old Welby had no way of knowing how near to the surface were those tears before.

"I confess, I do not see the joke," he said, slowly; "of course, I have nothing to do with the boy. If he goes and makes a fool of himself, like so many others, it is nothing to me. Indeed, I don't know who advised him to come here, where one can't help seeing what he's about. He would have been a great deal better, and out of one's way, had he stayed at Kensington Gore."

"He was paying four guineas a week for his rooms at Kensington Gore," said the padrona, meekly. "It was I who advised him to come to Charlotte Street. A man cannot live on nothing. If he had given all his income for rent—"

"When I was like him, I lived on nothing," said the R. A.; "but young men nowadays must have their clubs and their luxuries. Why, what education has he had that he should begin to paint pictures? A few lines scratched on a bit of paper, or dabs of paint on a canvas, do well enough for an amateur; but, good heavens, a painter! You don't see it, ma'am; you don't see it!—women never do. You think it's all genius, and nonsense. You will tell me it's genius that makes a Michael Angelo, I suppose; but, I tell you, it's hard work."

"I do see it," said the padrona. "Sit down, please, and don't be angry with me. I see it very well; but I can't help laughing, all the same. It is Laurie's way; he will never be a Michael Angelo. It is so like him to go and set up a great picture to surprise us. One of these days, if you take no notice, he will come like Innocence itself, and invite us to go and look at it. I was afraid something was wrong with him; but this quite explains why he stayed away."

"And that is all a woman cares for!" said Mr. Welby. "The boy's quite well, and his absence accounted for; and what does it matter if he makes an ass of himself?" Here the painter rose, and made a little giro round the room, pausing at the easel with a certain vindictiveness. "I wouldn't give much for that baby's chances of life," he said. "The creature will be a cripple if it grows up. It has no joints to its legs; and that little girl's got her shoulder out. There's where the elbow should come," he went on, making an imaginary line in the air. It was the same picture he had made a pretty speech about when he came into the room, from which it may be perceived that Mrs. Severn's terror of her lodger's visit was not without cause.

"I shall be so glad if you tell me what you see wrong!" the padrona said, with, I fear, more submission than she felt.

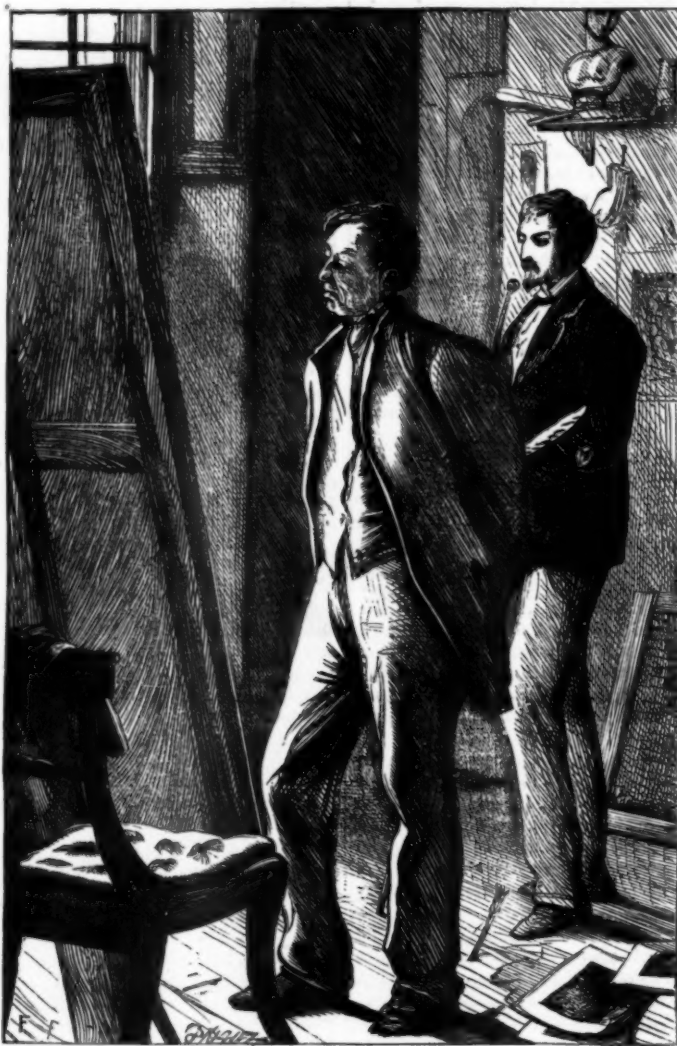
"Wrong, ma'am!—it's all wrong," cried the R. A.; "there's not a line that could not be mended, nor a limb that is quite in its right place; but I couldn't paint such a picture for my life," Mr. Welby continued, with a sudden melting in his voice; "nor anybody else but yourself. The body's out of drawing, but the soul's divine. Light!—nonsense—the light's all as it ought to be; the light's in that woman's face—I don't know how to better it. But this is not what we were talking of," he continued, suddenly turning his back on the picture.

"We were talking of Laurie Renton. What is to be done about this ridiculous boy?"

The padrona was a little disturbed out of her composure. She was overwhelmed by the praise, feeling all the sweetness of it; and she was pricked, and stung, and smarting, by the blame. It cost her a considerable

effort to master herself, and to bring back her thoughts even to Laurie Renton. "You must not be too hard upon him," she said, with her voice a little tremulous; "a mind that has any energy in it must work in its own way." This was said half on Laurie's account, no doubt, but also half on her own, after the assault she had sustained. "I think it would be best not to say too much about his big picture. He will read your disapproval in your eye."

Mr. Welby shrugged his shoulders. "I doubt if a young fellow would take much interest in reading my eye. But he may read yours, perhaps," said the cynic, with a questioning glance, which Mrs. Severn



"Forrester gave vent to a prolonged ah! accompanied by a slight expressive shrug, when he took the first look at the canvas."—Chapter XX.

was too much occupied to perceive, much less understand. And this was about the end of the consultation. They might admire and warn, and hold up beacons before the unwary youth; but there is no Act of Parliament forbidding a young painter to purchase for himself canvases six feet by ten, and to paint, or attempt to paint, heroic pictures thereupon. His advisers might regret, and might do their best to turn him to wiser ways; but that was all; and the question was not urgent enough to demand the sacrifice of the very best hours of a November day, which—heaven knows!—are short enough for a painter's requirements, in a district so rapidly reached by the rising fog from the city as Fitzroy Square.

It was the evening of the next day before Laurie carried out his resolution. With a little impatience he waited till it was dark, or nearly so, and then, with his sketch under his arm, went round the corner to the Square. To carry a portfolio or a picture under your arm, is nothing wonderful in these regions; and I think it was something of a foppery on Laurie's part to wait till the twilight; but, on the whole, it was rather Mr. Welby and old Forrester he was afraid of than the general public. The padrona was—as he knew she would be—in her dining-room, sitting in the firelight, with a heap of little scorched, shining faces about her, when he went in. One good thing of these short winter days was, that the woman-painter had a special hour in which it was impossible to do any thing, and a perfectly legitimate indulgence to play with the little ones to her heart's content. They were all upon her—little Edie seated on her mother's lap, with her arms closely clasped round her neck, and the boys on either side embracing her shoulders. "She is my mamma," said little Edie; "go away, you boys." "She is my mamma as well," said Frank and Harry, with one voice. They could not see Laurie as he came in softly into the ruddy, warm, homelike darkness, nor hear the voice of the maid who opened the door for him; and Laurie, soft-hearted as he was, lingered over this little glimpse of those most intimate delights with which neither he nor any other stranger could intermeddle. When he saw the mother with her children—who were all hers, and in whom no one else had any share—the helpless, hopeful, joyous creatures, encircled by the woman's soft, strong arms, which were all the protection, all the shelter they had in this world—his heart melted within him, the foolish fellow! Alice sat at her piano in the drawing-room, playing the soft dream-music which was natural to the hour; and to her, had he been like other young men, Laurie's thoughts and steps would naturally have turned; instead of which he stood gazing at her mother, who at that moment no more remembered him than if there had been no such being in existence. Laurie's heart melted so that he could have gone and sat down on the hearth-rug at her feet, as one of the boys did, had he dared, and asked her to let him help her and stand by her. Help her in what? Laurie gave no answer to his own question; and to be sure, he could not stand there in the dark for more than a minute spying upon the fireside hour. He put down his sketch on a side-table with a little noise, which made the padrona start. "I am not a ghost," said Laurie, coming into the warmer circle of the firelight. "Then you should not behave as such," Mrs. Severn said, holding out her hand to him with a smile; and then the mere accident of the moment brought him beside little Frank on the hearth-rug, as he had thought, with a little sentimental impulse, of placing himself. He sat down on the child's stool, and held out his hands to the fire, and looked up at the padrona's face, which shone out in glimpses by the cheerful firelight. Sometimes little Edith, with her wreath of hair, would come between him and her mother like a little golden, rose-tinted cloud; sometimes the fitful blaze would decline for a moment, and throw the whole scene into darkness. But Mrs. Severn did not change her attitude, or put down the child from her lap, or ring for the lamp, on Laurie's arrival. He came in without breaking the spell, without disturbing the calm of the moment. And, after an absence of more than a week, and some days' work and seclusion, it is not wonderful if he felt as if he had suddenly come home.

"This would not be a bad opportunity to lecture you, as I am going to do," said the padrona. "He has been very naughty, children; he ought to be put in the corner. Let us make up our minds what we should do to him, now we have him here."

"Give him some bad sums to do, mamma," said little Harry, whose life was made a burden to him in that way; "or make him write out fifty lines; and don't tell him any stories.—What have you done, Mr. Renton? I want to know."

"Give him a bad mark in the pantomime-book," said Frank. Now, the pantomime-book was a ledger of the severest penalties; the bad marks disabled a sinner altogether from the enjoyment of the highest of pleasures, and was as good as a pantomime lost. The savage suggestion awoke the sympathy of little Edie on her mother's knee.

"What has he done?" said Edie. "Poor Laurie! But mamma won't listen to these cruel boys. Mamma listens to me. I am the little princess in the new picture. Mamma, I love Laurie. Make him go down on his knees and beg pardon, and I know he will never do it any more."

"I will never do it any more," said Laurie, with one knee upon the hearth-rug. There was something in the soft, genial warmth, the kindly, flickering light, the touches of the children, and their sweet, ringing tones—the face of their mother now and then shining upon him, and her voice coming out of the shadow—which captivated him in some unexplainable way. There was no romance in the matter, certainly; she was years older than he was, and thought of him as his grandmother might have thought. But Laurie Renton was that kind of man. His heart was full of tenderness and sympathy, and a certain sense of the pathos of the situation which did not strike the chief actors in it. Mrs. Severn felt herself a happy woman—notwithstanding all that had befallen her—when she sat down by her fire, and felt the soft pressure round of those soft, baby-arms; but to Laurie there was a pathos in it which brought the tears to his eyes. "I will never do it any more," he said; "I will do whatever mamma tells me. I will be her servant if she will let me—" Perhaps it was well for Laurie that the children immediately burst into a chorus of laughter and jubilation over his proposal. "He will be our Forrester, and do every thing we tell him," cried the boys; and the padrona, carried away by their delight, thought nothing of the bended knee nor the unnecessary fervor of submission. I doubt even if she heard very clearly what he said, or was the least aware of his attitude; but probably instinct warned her that there was enough of this. She rang the bell, which was close to her hand, without saying any thing. After all, the firelight and the hearth-rug were only for the children and herself. And I think Laurie even was a little ashamed of his temporary intoxication when the lamp came in, carried by the maid, bringing back the light of common evening—the clear outlines of prose and matter-of-fact.

It was not till after tea that he brought his sketch to exhibit it. The children had gone up-stairs, and Miss Hadley had returned home, and no evening visitor had as yet arrived. When Laurie was left alone with the padrona, she laid down her needlework and lifted up her eyes to him, beaming with a kindly light.

"I have something serious to say to you now," she said. "I have been hearing dreadful things about you. You have not taken our advice."

"Our advice! I don't know what that means," said Laurie. "There is but one padrona in the world, and her advice I always take."

"Do not be hypocritical," said Mrs. Severn. "You promised to paint no pictures, but to be busy and study and do your work; and here you have set up an Edith as big as Reginald Suffolk's, and you call that taking my advice."

"Here she is," said Laurie, producing his sketch. He placed it on the table, propped up against the open work-box, and took the lamp in his hand that the lamp might fall on it as it ought. He did not defend himself. "I kept away as long as I could, meaning not to tell you yet; but that did not answer," said Laurie; "and here she is."

The padrona put away her work out of her hands, and gave all her attention to the new object thus placed before her; and whatever might be the qualities of Edith, the group thus formed was pictorial enough: the room all brightness and warmth, centring in the pure light of the lamp which Laurie held up in his hand; the fair, ample, seated figure gazing earnestly at the little picture; with her own face partially in the shade—behind her the open doors of the larger room, dark, but warm, with a redness in it of the fire, and a pale gleam from the curtained windows. But the actors in this still interior were unconscious of its effect: she was looking intently at the sketch, and he, to hear what she would say of it, holding his breath.

"Put down the lamp," said the padrona, after a pause, "it is too heavy to hold, and I can see. And sit down here till I speak to you. You have not taken our advice."

"I understand," said Laurie, and his lip quivered a little, poor fellow! "that means I may take away the rubbish. You need not say any more, for it will pain you. I understand."

"You don't understand anything about it," said Mrs. Severn, putting out her hand to retain the sketch where it was. "Let me say out my say. I don't want to like it. I wish I could say it was very bad. If it had been atrocious it would have been better for you, you rash boy! But I must not tell any fibs. I like the sketch; there is something in it. I can't tell how you should know about that woman, expecting every moment to see— Yes, put her away, Laurie, for a little, her eyes have gone to my heart."

Laurie put down his creation upon the table with a face all glowing with pride and delight. "I hoped you would like it," he said; "but that it should move you—" and in his gratitude he would have kissed the hand of the friend to whose counsel he owed so much. As for the padrona, she withdrew her hand quickly, with a momentary look of surprise.

"But I have more to say," she went on. "You must wait till you have heard me out. Don't be vexed or disappointed. I doubt if you will ever make any more of her. Now don't speak. I will say to you what I have never said to any one. How many sketches like that have I seen in my life, full of talent, full of meaning! It is not a sketch; it is all the picture you will paint of that subject. I know what I am saying. She who is so real in that, with her awful expectations, will be staring like a woman on the stage in the big picture. I know it, Laurie. I have seen such things, over and over again."

Laurie said nothing. He saw her eyes, which were still fixed on his sketch, suddenly brim over, quite silently, in two big drops, which fell at Edith's feet. Mortification, disappointment, and, at the same time, a kind of consolatory feeling took possession of him. The downfall was great from the first flush of joy in her approbation, but yet— Clearly it was poor Severn she was thinking of—poor Severn, of whom it was certainly the fact that he never did any thing good except in sketches. Laurie's heart rose magnanimous at this thought. If that was all, how soon he could prove to her that he was a different man from poor Severn! "It is not worth a tear," he said; "never mind it. I ought to have known that it would bring things to your mind—"

"It is not that," said the padrona, recovering herself, "it is because I am anxious you should not waste your strength. Put it up again where it can be seen, or, rather, bring it into the other room, where there is a better place. Take the lamp, and I will take the picture. I like it," she said, as she followed him into the larger drawing-room. "Let it stand here, where it can be seen. And I will send for Mr. Welby if he is at home. I like it very much—but I don't want you to paint the big picture all the same."

"If you like it, that is reason enough why I should paint the big picture," said Laurie. If the padrona discerned the touch of tender enthusiasm in his tone, she took no notice whatever of it, but busied herself in placing the sketch in the most favorable light.

"Mr. Welby came up-stairs, and insulted me, all on your account," she said, with a laugh. "Oh, don't look furious. I don't want any one to fight my battles. But it is cruel of him, all the same. He congratulated me on my energy, and on sending six pictures to the Exhibitions where he sent one. It was very ill-natured of him—a man who has had a whole long life to perfect himself, and nothing to hurry him on. Does not he think, I wonder, that even I would like to take time and spare no labor, and paint something that would last and live?" Mrs. Severn said, with a flush coming over her face.

"And so you do, and so they will," said Laurie, carried away by his feelings. The padrona shook her head.

"No," she said, "I don't deceive myself. I get money for my pictures. And that is about what they are worth. But don't you think, Laurie—you who understand things that are not spoken—don't you think it sometimes makes my heart sick, to feel that, if I could but wait, if I could but take time, I might do work that would be worth doing—real work—one picture, say, that would have a whole soul in it? But I can't take time: there are the children, and daily bread, and—he taunts me that I paint six pictures for his one!"

"Padrona mia, nothing that could be painted would be half so good as you are," cried Laurie, not knowing, in the thrill and pain of sympathy, what he said.

"I should like to paint something that would be better than me," said the padrona, "but I cannot. I have to work for their bread—and you feel for me when I tell you this. And don't you see, don't you see why I bid you work?" cried the artful woman, suddenly turning upon him, standing on her own heart, as it were, to reach him. "There is nothing to urge you into execution, to compel you to exhibit and sell and get money. Why don't you take the good of your blessed leisure, you foolish boy? Never think of the Academy, nor of what you will paint, nor of what people think. Make yourself a painter, Laurie, now that you have your life in your hands, and heaps of time, and nothing to urge you on.—But, good heavens! here are people coming," cried Mrs. Severn—"to find me flushed and half crying over all this, I declare. Talk to them till I come back, and I will send down the child to help you; and don't forget what I've been saying," she said, as she rushed out of the room.

This assault had been so sudden, so trenchant, so effective—he had been led so artfully to the softness of real feeling, in order to have the thrust made at his most unguarded moment, that Laurie stood confused when his Mentor left him, not quite sure where he was, or what had happened. Had it been any stranger who had appeared, Mrs. Severn's young friend would have made a poor impression upon her visitor; but, happily, it was Alice who came in—Alice with her curls—harmonious spirit, setting the house to music, as her mother said. This was all poor Laurie made by his honesty in carrying his Edith, in her earliest conception, for the approval of the Square.

[TO BE CONTINUED.]

## AMONG THE PRAIRIE-CHICKENS.

THE red rays of the morning sun are just glancing over the gentle swell of a rolling prairie in Central Illinois, on a fine bracing September morning, as our party issue forth from their shooting-quarters. The "drag" is at the door. "Spot" and "Shot" are waiting impatiently for the sport to begin; and Joe, our driver and general factotum, sits with pipe in mouth and reins in hand, as contented a specimen of an Irish "whip" as could be found in Champagne County, or the Central Park. He was one of those happy mortals who, like Mark Tapley, was jolly under all circumstances, and who, like our old friend Mickey Free, believed "they'd make illegant Turks, being fond of tobacco and ladies."

"Who are our party?" asks some inquiring mind. Another, possessing Paul Pry proclivities, would like to know who "Spot" and "Shot" are. Well, then, here we are in detail: *Dramatis Personæ*.—The general; Captain B—, an English sportsman; Frank H—, the best shot in Illinois; Joe Murphy, the driver; Tom and Jerry, the horses; Shot and Spot, two pointer-dogs.

Is all ready? Stop! before starting, let us load our guns. It's done, and away we go. What splendid dogs, white and liver-colored, smooth and soft as velvet, small heads, exquisite limbs—the skin showing the delicate tracing of each cord and vein! Here we are, at last, where the sport is to begin. You see around you on every side, as far as the eye can reach, an undulating prairie, covered with grass and wild-flowers—among them that exquisite scarlet flower the Painted Cup, whose beauty Bryant has celebrated—with here and there a stubble-field, where wheat and oats have been cut, and golden acres by the hundred of Indian-corn, swaying gracefully under the morning breeze; and your ears are greeted with the swelling chorus of myriads of meadow-larks and other sweet songsters of the woods and fields.

As it is early—not yet five o'clock—we will go first into the stubble; later in the day we will try the prairie, where the game-birds "most do congregate" at mid-day to seek, amid the tall grass, shelter from the sun. "Hi on, Shot! hi on, Spot!" and away the beautiful creatures go, almost flying over the ground, one to the right, the other to the left, while we follow in a line, with our guns cocked and raised, ready for instant use. With an instinct and training that obeys the slightest word or waver of the hand, the dogs range over the field, "hi on," "steady," "drop," or "find dead," with an almost human comprehension. Look! Shot has turned short to the left, and moves slowly forward—then he stands—his head and tail, erect, form a straight line, his eyes dilated, lips parted and drawn slightly back, and his nostrils fairly quivering as the warm scent salutes them. We approach, and, although the game is under the very muzzles of our guns,



can see nothing. "Hunt them out, Shot!" slowly he moves on, quivering with excitement, when suddenly, whirr-r-r, whirr-r-r, rise the birds, to the right and left as well as in front. Frank "does" a chicken with each barrel, the general and captain bringing down two birds with their four shots. See how the dogs stand motionless—unmoved by the *fusilados* directly over their heads. Stop! never advance to retrieve "dead" with your gun empty. Now, having reloaded, we are ready. Come on. "Find dead, Shot! find dead, Spot!" The four fat prairie-chickens are soon at the bottom of Joe's game-bag, and with a "hi on" to the dogs, we again move forward. Suddenly both make a matchless point when a hundred yards distant. Don't run up to the dogs. Will they "stand" without "flushing" the birds until we can walk there? Yes, for an hour, steady as a stone wall. How statue-like their pose! Not a muscle has moved since they made the point. Whirr-r-r, bang, bang, and more birds are added to our bags, the gallant captain never failing to bring down a bird, *when he fired simultaneously with and in the same direction as Frank H—*. So we beguile the hours until near noon, when the heat compels us to seek shelter in the woods a few miles distant. Seated under an old oak, Joe brings out a large basket containing what the squire in "Don Quixote" calls his *fiambreras*, that magic-eloquent Castilian word for cold collation, and the contents are soon spread before us, and in due time disposed of.

Around us are elms, oaks, and sycamores, which were growing there long before the Mayflower and Miles Standish made Plymouth Harbor, and long before the people of Pavonia migrated from Communipaw to the Island of Mannahatta—trees centuries old, where the red-men of the prairies first saw the devoted missionary Marquette, and welcomed the chivalric Chevalier La Salle to their happy hunting-grounds. Many of the trees, whose trunks are not less than eight feet in diameter, and at least one hundred in height, are twined with woodbine, ivy, and wild-grape, curled serpent-like around their huge trunks and limbs. After a fragrant Havana; sundry stories of shooting and fishing, related by Frank H—; Crimean adventures by the captain; and Rebellion reminiscences from the general, with several glasses of Joe's punch, in which the whiskey is to the water as Falstaff's sack to his bread; and an hour's *siesta*, Tom and Jerry are put to the drag, and we again begin our warfare against the wild and beautiful denizens of the prairie, returning just after dark with our hundred and ten birds—"enough," as Joe said, "for a camel to carry." While *en route* to our sleeping-quarters, we come upon a slough about four feet in width. As Joe approaches, he whips up the horses and gives them a sharp hit, just as the drag is deep in the mire, which causes Tom and Jerry to spring up the slight ascent, when the back seat in which are seated the unfortunate Englishman and Frank H—, gives way; just at the instant that the horses spring forward they go backward headlong into the slough, where they actually stick with their feet in the air, until dragged out, the most frightful-looking objects that can possibly be conceived—one mass of mud from head to foot. With this single exception—which convulsed the general and Joe with inextinguishable laughter—no mishap befalls us during our week's sojourn "among the prairie-chickens."

### NATURE AT WORK.

IT is a pleasant picture to look upon—man in his first, undisturbed enjoyment of Nature, unconscious yet of the duty of labor, and lavishly provided for with all he needs! The air is warm; he wants no clothing. No tilling the ground is required; for magnificent clusters of luscious bananas, bent by their own weight, come within easy reach of his hand, and colossal cocoa-nuts fall, whizzing through the air, at his feet. Or the bread-fruit-tree spreads its broad, branching arms sheltering over him, and shows him, shining brightly through the dark foliage, gigantic apples of marvellous taste. Palms and pisangs everywhere deck his table from season to season. His food is prepared wherever he needs it; and the magnificent leaf of the pisang, moreover, protects him against all sufferings in the months of rains and storms. Close by he finds the friendly bamboo, which in itself gives him food and shelter alike. Reclining on his couch of flowers, refreshed by rich perfumes, and sustained by abundant supplies, furnished by his beneficent mother, Nature herself, he lives only to enjoy, and slumbers only to dream, of a world untainted yet with sin and

evil. The whole earth is to him as yet only a beautiful garden created for love and sweet enjoyment.

Need we wonder that all the nations of the earth have, in their traditions, preserved the memory of these happy days, and of those gardens, now called an Eden, and now a Paradise? And yet we may well doubt whether such happiness could compare with that earned by man in the sweat of his face. There can be little doubt—setting aside revelation as beyond all discussion—that our race had its infancy, during which Nature took it in hand, and educated it till it was strong enough to be weaned. But, when the years of childhood had passed, like a wise mother, Nature also gradually withdrew the protection that was no longer needed, and ceased to supply, with bounteous hand, those wants which were better satisfied by man's own exertions. Our race spread from land to land, and the soil, sharing in the curse that had fallen upon the sinner, refused to produce, unless forced to do so by labor.

And thus labor became a blessing, growing out of the curse itself. The proof of it lies in the simple fact that happiness dwells not where Nature is most profuse in her gifts, and that the tropics are any thing but the house of industry, or the scene of progress. There, where man's wants are still amply supplied by his lavish mother, he remains idle, barbarous, and savage; while the arts and the sciences, agriculture and commerce, only prosper in the temperate zones, where man must struggle, more or less painfully, for his existence. In the burning lowlands of South America, in a large portion of the gorgeous South-Sea Islands, as far as the paradisaical regions of Borneo and Sumatra, the splendor and profusion of Nature only serve cannibals, who prefer the flesh of their brethren to all the ample provisions presented to them by field and forest. Africa, with its abundance of animal life and its gorgeous displays of fruit-bearing trees and fragrant flowers, is the scene of incessant wars, bloody butcheries, and an abominable traffic in human chattels. Labor not only elevates, it ennobles man. Hence Nature in her wisdom surrounds him on all sides with eloquent lessons on the subject. There is no rest in the world around him, from the ocean, that beats unceasingly against the firm land, to the heart in his bosom, that marks every second of his brief life upon earth. All is in motion and at work; for work is life, and inactivity is death. The very host of stars in the heavens move incessantly on their appointed orbits, and the music of the spheres is no idle fancy of a Kepler, but the faint echo of the shouts of joy uttered in sweet accord by the merry workers on high. The waters of the earth move by day and by night, and work their way without rest and repose, from the clouds on high, to the hidden springs deep down in the earth, and back again; from the diamond-like dew-drop on the tender blade of grass, to the glittering rainbow in the heavens. Let them rest but a moment, and their life ceases; foul odors arise, and death—dismal, disgusting death—is sure to ensue. The mighty rock has an inner life, which is silently but forever at work, and, at times uttering mysterious sounds, as in the case of the Memnon statue, always ends in disintegration. Masses of stern metal—even wrought iron—are not idle, but busily at work in their innermost recesses; and, while the iron of the axle-tree of a railway-car, or of the rail itself, is chosen among all the durable materials of the earth, because it is best able to resist continuous, powerful friction, the diminutive particles of which it consists, its molecules, gradually change place, and the tiny crystals, leaving their original position, and assuming new relations to each other, finally alter the nature of the metal, till it becomes useless.

Greater and harder work yet is done among tender, delicate plants. The fair flower and the welcome fruit look as if they had been formed in play and for pleasure only. But how different is the reality! The plant is nothing but a mass of cells, which are unceasingly engaged in hard work, and do not even rest entirely during their apparent sleep in winter. Every one of them has faithfully to receive the sap that rises from the roots, and to hand it on to the next in order, till it is carried up to the uttermost branches and to the tiniest leaf that has just unfolded. Small as the effort appears in each cell, the total effect is enormous; botanists tell us that an oak-tree of moderate size performs the work of seven horses merely in pumping the water it needs, and the substances dissolved in the fluid, from the ground to its topmost branches. The sap in a grape-vine works so amazingly hard that it resists the pressure of a column of mercury twenty-six inches high, and, under favorable circumstances, in the period of "weeping," the sap will, in two hours, pass through a glass tube twenty-five feet long,

and run out at the upper end! Such is the work done by little cells, which compare with the cell of a beehive as a mustard-seed compares with a good-sized apple! But their wondrous work appears still more astounding when we consider the great variety of operations which they are called upon to perform. For, besides the duties which are common to all, they have, in groups, special services to render, some manufacturing starch, others albumen, and still others oils, tannin, wax, and other strange products, so that the whole presents a well-ordered community, consisting of workmen of every kind. Each one of them works for himself, and yet also in full communion with all the others, and the result is that they all thrive and prosper only as long as they are thus hard at work. Only by such unceasing and well-directed efforts are they enabled to accomplish the miracles which astonish us year after year; the green dress in which they clothe every forest in spring, as by the power of a magic wand; the fairy beauty, of countless flowers, with which they adorn every sprig and branch; and, finally, the change of a few frail leaves into a solid fruit, with luscious flesh or precious juices. Nor do they work merely for profit; far more touching to the careful observer of Nature at work is the tender care with which these tiny cells endeavor to repair an injury done to their neighbors. Here, on a simple moss, which consists but of a single layer of cells, an insect-bite is filled up by speedy work, a new top is supplied, or the symmetry of an outline restored; there, the bark of an ancient tree slowly but indefatigably works to close over a cruel gap made by a wanton hand, and to cover the wound with its protecting shield. In the flower, a higher motive apparently directs the work; for, as the tender seed-germ gradually swells and grows, the fair blossom lays aside its splendor, and devotes all the elements, which lent it such beauty and sweet perfume, to the perfection of the desired fruit.

Work in the animal world is, of course, directed more clearly and intelligibly by powerful sympathies and antipathies, and thus approaches more closely to the work done by man. The convenient but unmeaning term *instinct*, to which has heretofore been referred every approach to intelligent action on the part of animals, has now been recognized as a true intelligence, which can justly claim a certain degree of free choice and gradual development. The poor animal has to work at least as hard as man for the purpose of supporting its life, and He who clothes the lilies of the field and feeds the young lions when they are hungry, has assigned to them both the way in which they have to weave their gorgeous garments and to find their daily prey. The best organized systems of labor are also the most familiar to our eye; bees and ants represent in their work, once more, fully and wisely organized communities, in which each one works for himself, and, at the same time, for the whole. The beehive would soon perish, if a few bees refused to do their work, but the recusants themselves would perish as surely, and more quickly. The government by a queen is quite characteristic, for it proves at once that here the propagation of the race, which is the queen's sole duty, is the ruling principle to which all are subordinate, and the law which regulates their work. The error formerly entertained that there were idlers as well as laborers in the queen's realm, has long been corrected; all work, but each in his own way, and according to a careful division of labor. And here, also, the power of union is strikingly exhibited in the marvellous results obtained by combined labor; the work of each bee seems so small, almost trifling, and yet a beehive will show, at times, several pounds of honey and wax as the result of a single day's work! And even greater results yet are obtained by other diminutive workmen in tropical regions. All the works accomplished by the hand of man, his gigantic pyramids, his lofty cathedrals, his noblest monuments, sink into insignificance, in point of size, when compared with the work of the termites. The conical structures, which they raise upon a deep, broad foundation to more than a man's height, so firmly built as almost to be indestructible, and containing just stories enough to secure its inmates against the highest floods—these buildings are fully equal to all that man has ever achieved, as far as material greatness, aside from art, is concerned. And yet even these bold and ingenious edifices dwindle into nothing by the side of the enormous, mountain-like structures which tiny corals, by their united labor, raise from great depths in the midst of the boundless ocean, creating, as it were, great islands and new homes for the children of men. As the giant tree, in Norway forests, was once but a single, tiny cell, so these gigantic atolls also began in a microscopic cell, within which the almost invisible animal commenced its lifelong work.

There would be sorry comfort, however, in the mere fact that all Nature is thus incessantly hard at work, if we did not couple with this knowledge the discovery that this work does not end with the immediate result, but leads to gradual improvement throughout all Nature. Until recently, proud man has claimed for his own race alone the merit of continued progress and of steady perfection. But recent researches have led to the conviction that in Nature also every thing tends to rise to higher beauty and greater strength, from the nebular masses in the vast universe, which are fashioned and shaped by as yet unknown powers into comets, and perhaps even planets, to the lowly weed, which is made to please man's eye by its increased beauty, or to cure his diseases by newly-discovered virtues. The wild grass of the mountains becomes the nutritious cereal of our plains, and the useless fruit of the East is changed, in the West, into a grateful relish. All animals have more or less the power of accommodating themselves to new exigencies; the swallow, that builds its nest under the eaves of our houses and barns, is no longer the same as that which lives in sand-holes in Siberia; and the muscle, fated to live in stormy seas, builds a stouter house for itself than others ordained to enjoy the peace of a quiet bay. Even the manner of building birds'-nests changes, according to Audubon, with the climate and other circumstances that affect their owners. Thus, the animal that lives in the wilderness, remote from the habitations of man, remains forever the same, while the same race, domesticated among us, and in constant exercise of its faculties in the service of a higher intelligence, gradually acquires new powers, fairer forms, and superior capacities. For the animal world shares with man the curse that fell upon him when sin entered his heart; with man, the "whole creation groaneth," and with him the earth, and all its inhabitants also, rise steadily, step by step, to greater perfection. And how is this accomplished? By work! By turning the curse into a blessing, and changing toil into joy; by following the example of Nature, which is everywhere hard at work, in the frozen seas of the Arctic not less than among the exuberant fulness of the tropics; never resting by day or by night, year after year, and age after age, and yet ever praising, in all its works, Him who has made the heavens and the earth and the sea, and all that in them is.

## PROBLEMS OF METEORS AND COMETS.

### II. COMETS.

LIKE meteors, comets, up to recent times, have offered difficult problems for solution. Their aspect, altogether different from that of all known celestial bodies, their sudden advent and disappearance, their paths through heavenly regions, in which no planet is ever seen, the change of their form, and the immense spaces covered by their tails, furnished evidence, before the revival of science, that comets are strangers in the planetary world. It was, therefore, quite natural that, in periods when superstition reigned, and when to the position of the planets were assigned influences upon the fates of mankind, these celestial bodies were supposed to announce extraordinary events.

Science has at last dispelled this superstition. Yet the nature of comets has remained undetermined, and the series of problems has only increased with the steady progress of astronomical knowledge.

The course of the comets has become calculable by Halley's grand discovery. We have gradually learned to predict the advent and disappearance of a large number of them, and know now that they are subject to the laws of the attraction of the sun, and that they move in mathematically-definable paths, either once only or several times around the central body of the solar system. Yet the differences of distances, and of the periods of revolution resulting therefrom, are striking. There are comets which complete their course in three years, and others whose period extends to more than ten thousand years. While there is but one and the same plane in the planetary world in which these heavenly bodies accomplish their revolution, comets coming from all portions of the firmament intersect this plane at all possible angles. All planets move in orbits deviating but little from a circle; but comets traverse eccentric orbits, which are sometimes so elongated that the longitudinal diameter is a thousand times greater than the transverse. The course of all planets is from west to east. Comets move in all directions. These observations have

long since given rise to the idea that comets are strangers in the solar system, and that, although subject to the universal law of attraction, they do not belong to the symmetrical order and arrangement therein prevailing.

Nevertheless, astronomers could not fail to make the contradictory and remarkable observation, that there are many thousand more comets than planets, and that the apparent strangers, or guests, form the chief element in a system in which the ordinary members exist in comparatively small numbers.

But still more problematic than the course, and the surpassingly large number of the comets, has been their external appearance and substantial character. While some comets are so small that, even in close proximity to the earth, they can be seen only with large telescopes, there are others which, together with their tails, reach a length of one hundred and eighty-five millions of miles, and occupy a space far greater than the distance of the earth from the sun. The tails of comets change within a few days, almost under the eyes of the observer; they expand when the comets approach the sun, and contract as they recede, and they usually are turned away from the sun. It was, therefore, believed that the increasing heat affected them, and many problematic phenomena were explained by the supposition that the sun exerted its attraction upon the so-called nucleus of the comets only, and repelled their remaining parts.

In the year 1823, however, a comet made its appearance that contradicted these views. It had two tails, one directed toward the sun, and the other turned away from it. Other comets, again, showed several tails, which were striped and turned in various directions; finally, a closer examination has shown that the tails are not turned from the sun, but that they lie most generally between this direction and the orbit the comet has just traversed.

Still more surprise was caused by the discovery that even the most prodigious and colossal comets are of very rare density, and do not exert the least attraction upon the celestial bodies in whose vicinity they move. The comet of 1770 passed, as was positively ascertained, through the lunar orbits of the planet Jupiter without causing the slightest disturbance. The same comet afterward approached our own planet so closely that it was scarcely farther off than six times the distance of the moon. Had it possessed a power of attraction, or, what is the same, a density similar to that of the earth, it would have changed the revolution of the latter around the sun so markedly as to have rendered our year *three hours* longer; no change, however, took place, even to two seconds, and that fact justifies us in the belief that the density of the comet was not the five-thousandth part of that of the earth. Other calculations show that, in the year 1834, the earth must have passed through the tail of a comet, and, nevertheless, there was no perceptible trace of influence from its attraction, even upon the ebb and flow of the tide, or upon the atmospheric air. Still more problematic is the perfect transparency of comets. We see through the tails, and even through the nucleus, not only the fixed stars in undiminished light, but the rays of light are not refracted, which they would be if these comets even consisted of nothing but transparent gases. In one word: although the course of the comets had, since Halley, become revealed, and the laws of their orbits more clear, yet their essential character has remained problematic, and their problem has become, with the progress of science, even more difficult of solution.

The comet of 1770, already referred to, proved how uncertain is, in fact, the stability of the cometary orbits. This comet made its appearance quite suddenly, and caused considerable interest in the scientific world. The most careful calculations showed that its revolution amounted to five and a half years. Comets of so short a period were not known at that time, and that fact alone greatly astonished scientific men. Yet they were even more surprised that this comet, so easily discovered, and, during its proximity to the earth, plainly perceptible, even to the naked eye, had never been seen before. They were almost inclined to assume that this stranger was a new-born child of heaven, which had entered for the first time upon its path through space. They waited for its return, in order to ascertain whether their calculations were correct, but these revealed the unfavorable fact that the return of the comet took place simultaneously with the rising of the sun above the horizon, and that it would, therefore, be invisible. They waited patiently for another chance, in the hope that the comet would appear again at night, and be visible, but in vain. It did not show itself, in spite of all computing and searching,

and for a long time no other explanation could be given but that the new-born stranger had mysteriously disappeared.

To the honor of science, however, this problem was solved in a brilliant way. Untiringly-repeated observations disclosed the fact that this comet had met with singular mishaps. Having started from very remote worlds, it came, in 1765, very near the planet Jupiter, and became so seriously disturbed in its course that it was driven into a new path, in which it would complete its revolution around the sun in five and a half years. But, while revolving in its new orbit, it came, in 1776, again near the spot from which Jupiter had thrown it eleven years ago. As that planet, however, accomplishes its revolution in eleven years, the comet experienced again the latter's powerful attraction, and was thrown out of its orbit and into another, in which it will never again be seen by the eyes of man.

We say *never again*, unless it meets for the third time with a similar fate, compelling it to seek another path through space, and that is not only possible, but, as we shall see hereafter, in treating upon the influence of the planets upon the comets, even very probable.

The problem of the comet of 1770 is thus solved, but the solution concerns only, as we see, its *course*. The nature of these celestial bodies is rendered thereby only more problematic. We have to question ourselves even more closely now. What part do these heavenly bodies play in the economy of the solar system, if they are so powerfully influenced and affected by the planets?

#### EXISTENCE OF COMETS.

The most recent discoveries in regard to many other comets have, remarkably enough, quite overshadowed the highly-surprising and twice-repeated change in the course of the comet of 1770. Since the short time that Schiaparelli's publication has been known, a revolution, in the scientific view of the comets, has taken place—a revolution that renders the assured and permanent existence of these celestial bodies very problematic. To be sure, it has not come of a sudden. Like every other revolution, it had its precursors that pointed, plainly enough, to a catastrophe. But, as in all similar cases, the precursors are only rightly comprehended when the catastrophe itself furnishes the explanation. A number of single phenomena are then grouped together to make up a full picture. The single phenomena, that are of importance here, must be considered *seriatim*, and this apparently-indirect course will lead us directly to our objective point.

Up to 1818, only two comets were known, the calculation of whose period was verified by their return—the comets of Halley and of Olbers. Both orbits lie far apart, and form, as far as situation is concerned, a complete contrast to each other; they agree only in the equal duration of their period—about seventy-five years—but there was no reason for particularly appreciating this circumstance.

Things have changed since 1818, when, with the discovery of Encke's comet, many of these bodies became known whose period was much shorter, being, in the ten belonging to that era, from three to six years. They further agree in that their orbits do not pass beyond those of the small planets; that the direction of their course tends from west to east, like that of all planets; and, finally, that the inclination of their orbits to the plane of the earth's orbit is not greater than with some of the smaller planets.

These points of resemblance have induced their classification in one particular group; and this division into groups became still more justified after comets had been discovered, in 1846 and 1847, that had also, most singularly, a period of about seventy-five years.

Let us first consider the comets with a short period—those belonging to the "inner group"—and study a series of phenomena that are very striking. Encke's comet, after a few returns, exhibited a regular shortening of its period, and a similar observation was made in the comet of Faye. The explanation of this singular phenomenon was sought in the assumption that the ether of the universe offered a resistance to the very loose mass of these comets, and gave, therefore, a preponderance to the solar attraction, whereby an approach to the sun and a continual shortening of the period of revolution becomes inevitable.

Encke's comet, however, revealed still another phenomenon that had hitherto attracted little notice, and to which Professor d'Arrest, of Copenhagen, has recently, with good reason, invited attention. Encke observed, in 1823, that the comet grew fainter in light. D'Arrest calls to mind Encke's words: "Soon nothing will be left of the comet," and points to a sentence of Encke in Bode's *Annals* that ex-



presses a similar apprehension. The latter is corroborated by the fact that the comet has indeed steadily decreased in brightness.

A second comet of the same group (Biela's comet) presents a more complex problem. This comet was discovered, in 1826, by the Austrian officer Biela, and its computed period of six and three-fourth years fully confirmed. It has since that time been regularly and everywhere observed without displaying any particularly noticeable peculiarities. But, in January, 1846, it exhibited a phenomenon that astonished everybody: it divided itself into two parts, almost under the eyes of the observers, and each single part separately pursued its course. It thus presented a spectacle that was not only without explanation, but that also contradicted all hitherto absolutely-confirmed axioms of the attraction of the masses. The latter has since then grown even more complex. Upon the comet's return, in 1852, the distance of its two parts had become eight times greater than in 1846; they were now as completely independent of each other as if they had never been united. Each of them, however, was large enough to warrant with certainty its discovery on its return, and the only regret that was felt centered in the fact that its next appearance, in 1859, would place the comet in so unfavorable a position as to render its observation extremely difficult. The computation for the year 1866, on the contrary, gave the comforting assurance of a most favorable position, and the hope that careful observation would succeed in finding an explanation for this phenomenon.

But this hope was fallacious. *Biela's comet has totally disappeared.* The calculations being quite faultless, the presumption only remains that, from the same unknown cause which had induced the first division, another one had taken place, and consequently a sort of dissolution of the celestial body into so minute elements as to withdraw themselves wholly from the eye of observers.

We see thus that two of the *longest-known* comets, belonging to the so-called "inner group," are subject to certain contingencies which threaten, in the strictest sense of the term, their existence, and we have reason to believe that the more recently-discovered comets will share the same fate. On their phenomena—that is, in the aspect which the other comets of the so-called "inner group" reveal to the eye of the observer—they have not yet betrayed any great changes; but, within late years, a fact has come to light that speaks strongly against the permanent existence of these celestial bodies.

Most of these comets pass through orbits that render a conjunction of two comets at one and the same point of the heavenly space probable, and even a collision of a comet with a planet at some time or other absolutely certain. Encke's comet was long ago known to share with Biela's comet a point of the same orbit. This is of little consequence so long as the comets do not meet at that point; but, whenever that should happen—and come it will, and must—a union of both, or even a division and destruction of both, is probably inevitable.

Apart from that, however, there are other circumstances menacing the existence of each of these two comets, or at least the immutability of their orbits. Encke's comet approaches so closely the orbit of the planet Mercury, and Biela's so closely that of the earth, that a conjunction with the planets must take place at a calculable future period. Indeed, there would have been a fair prospect of the conjunction of Biela's comet with the earth toward the latter part of December, 1938, had it escaped its mysterious destruction.

The comets of Brorsen and Faye pass through the orbit of Jupiter, and a conjunction with, or even a close approach to, this planet will certainly affect their existence or course. De Vico's comet bears the same relation to the planet Mars. Another one (Tempel's comet, No. 1, of 1866) has already, as we shall see further on, been thrown into the immensity of space by the planet Uranus, and rotates now in a course whence, each sixteen and one-half years, it wanders, at one time, into the orbit of the earth, and, at another, into that of Uranus.

If we add to all this the fact that astronomers have, by very recent computations, demonstrated the possibility of a simultaneous conjunction of *three* or even *five* comets at one time, and the same point in space, it is easy to comprehend that their existence is exceedingly unstable, and that their fates and the position of their orbits offer no less complicated problems than their condition and form.

We may now anticipate that the problems of meteors bear to the problems of comets that interesting relation in which one problem is the other's solution. And this is even so. Schiaparelli has happily

shed light upon this wonderful relation. But the performance of this task was by no means as easy as it might appear.

## HINTS FROM SAINTE-BEUVE.

### ST.-EVRÉMOND AND NINON DE L'ENCLOS.

WHO could be better fitted to introduce us to Ninon than that polished scholar and courtly man of the world—St-Evremond?

With what an air of graceful superiority he comes before us—perhaps the equal of Montaigne in genius, certainly his superior in refinement! Endowed by Nature with trenchant wit and fiery passions, he could temper the wit with easy tact, and crush the passions with sensible decision.

In his youth, when he sparkled amid the *jeunesse dorée* of a brilliant court, he was, of course, like all the other cavaliers, in love with Ninon the irresistible; but he was, too, more than this—to his credit be it said—he was her lifelong friend. During the tedious exile that followed his disgrace at court, he still continued to correspond with her, and the few letters of Ninon that have come down to us are those addressed to St-Evremond. Well were it for the courtly enchantress if these letters were the only records of her career, for they display in most favorable light her higher qualities of heart and mind.

Let us glance at St-Evremond's life. Born in 1618, he was three years older than Ninon; and he died in 1703, at the age of ninety, she surviving him till 1705, and dying at nearly the same advanced age. St-Evremond's career naturally separates into two distinct parts. Until he was forty-eight years old, he lived in France, either at court, basking in royal sunshine, or (for he was a gallant soldier) in active service in the field, where his brilliant industry attracted the approbation of his renowned superiors, and the path to military distinction seemed opening fair before him. But his happy anticipations were cruelly nipped in the bud. After the arrest of Fouquet, there was found, among the papers of Madame Duplessis-Bellière, a pungent, spiteful letter from St-Evremond, denouncing the Treaty of the Pyrenees, and reflecting, in no measured language, upon the policy of Cardinal Mazarin. This was too much for Louis XIV. to bear. "The Great King," in a rage, ordered the audacious author to be arrested at once, and committed to the tender mercies of the Bastille. Our military wit, however, seems to have been on the alert; for, receiving timely warning, he fled from France to Holland, and from Holland to England, where he made his home for forty-two years.

He appears to have led a very pleasant life there, sought and caressed as he was in the most fastidious coteries, indulging, when he chose, in philosophical and literary pursuits, making occasional trips to foreign countries, and enduring his exile, on the whole (just as McArthey, the famous duellist, told his irritable neighbor at the opera, one night, he ought to endure his [McArthey's] sudden fit of coughing, which came on at a critical part of the performance), "if not with the philosophy of a Christian, at least with the courtesy of a gentleman." What contributed in no small degree to reconcile St-Evremond to his absence from France, was the arrival in England of the Duchess de Mazarin, niece of that very minister who had been the prime cause of his disgrace. He was even fascinated by her beauty and intelligence, for both of which she was, like all the nieces of the cardinal, famed—Ninon herself once remarking that every charm seemed inherent in the Mazarin blood; and from this time forward the life of our courtly exile became closely interwoven with that of the lovely duchess.

Of all the enjoyments St-Evremond tasted—not only in maturer years, but amid the heated passions and fiery follies of youth—conversation seems to have afforded him the greatest pleasure. "The only drawback I can discover," he says, "to the exquisite pleasure to be derived from intercourse with refined women, is the pains one has to be constantly taking not always and immediately to fall in love with such concentrated charmingness."

See, too, his lively directions as to behavior in ladies' society:

"If you want to be highly successful among women, you must fall in love; that failing, try to assimilate yourself with their sympathies; or, if you do not succeed in that, manage to make whatever merits or charms they possess shine on their brightest lustre. If you cannot storm the citadel of a woman's affection, at least make yourself master of the bastion of her intellect; for, next to a lover, to whom

she surrenders every thing, ranks the admirer who gives her means and opportunity for making a display in society."

Then, again, listen to the shrewd old fox:

"You should never let the conversation languish by discussing matters in which they take no interest. Such indifference is utterly at variance with the female character. Either make them love you, or exalt what they love already, or develop some fine quality in them which will make them love themselves better—for love of some sort is essential to them. Love, love, love—their hearts are never free from it."

Ah, cunning St.-Evremont! Nevertheless he has to admit that some women have been able to restrain the all-absorbing passion without losing their charm; and he renders full homage to these admirable beings—rare, and almost divine. For instance:

"In candor, I must confess, however, that I have occasionally met women endowed with all affection and tenderness, unaccompanied by love, upon whose secrecy in matters of confidence I could depend as I would with a friend of the coarser sex, though their masculine wit and discretion did by no means eclipse their feminine grace and beauty. But these are rare exceptions, which Nature, either from design or accident, has sometimes been pleased to permit among her general rules. Semi-infidels to their own sex, they have possessed themselves of the better qualities of ours."

St.-Evremont amused himself, too, by drawing an ideal picture of a woman, "such as she never was or ever will be." In the person of his heroine "Emily," he unites the most opposite qualities, and those most rarely combined:

"In endeavoring to describe a *perfect person*, I did not choose my character among men, because there is always a certain essential softness lacking, but which may be found among women. And I deemed it less improbable that I might find in a woman the strong and healthy reasoning-power of man, than in a man that attractive loveliness which abides so gracefully with many females."

This combination of high intellect and personal loveliness was not, however, the offspring of St.-Evremont's imagination. His "Emily" was not entirely a fictitious personage. He had seen the original before he began to paint, and that original—who, if she did not actually sit for the picture, at least suggested it to the banished word-artist—was Ninon de l'Enclos herself.

Let us see her, now that St.-Evremont has kindly drawn aside the *portière* and ushered us into her *salon*; for there we may behold her wielding that wonderful influence which had power even to purify the atmosphere of the Hôtel Rambouillet and mitigate the licentiousness of *les Précieuses*, occupying a prominent place in the history of the literature and society of her age. We may see her thus, and with pleasure, in her best light. First let us glance, however, at her earlier life, though it may give rise to painful reflections that the brightest sunshine should cast the heaviest shadows.

Mademoiselle Anne de l'Enclos (for *Ninon* is nothing but a courteous diminutive) was born at Paris, May 15, 1616. Her father was a gentleman of good family, a man of brilliant parts, with a turn for music, and fond of society, but an inveterate duellist and intriguer withal. Her mother, on the contrary, was demure and precise. Both died when she was young; at fifteen she found herself left an orphan, with beauty, and a determination to make the most of her charms. She was not long in openly declaring her contempt for the social dogma, which decrees that there shall be one code of morality for men and another for women.

Long as is the known list of her conquests, there is every reason to believe it is far from complete. Upon this unenviable stage of her career, where she played the part of rival and successor to Marion de l'Orme, it is not pleasant to linger. The over-curious in such matters can find plenty of stories about her elsewhere. Her reputation was such that it drew down Voltaire's wit upon her: "If this state of things goes on," sneered he, "there will be as many anecdotes of Ninon as of Louis XIV." Rather let us turn to those higher qualities of mind and heart which could enable her to survive the wild orgies of the regency without being utterly ruined, which could neutralize the powerful disapprobation of the queen-regent, and which could induce no less a personage than the Prince de Condé, at a time when she was out of favor at court, to stop his carriage when he met her in a public place, descend from it, hat in hand, and salute her courteously before all the bewildered spectators.

It is said that at one time she was on the point of being banished

to Cayenne; be this true or not, it is certain she never went there: perhaps it was, after all, only a stratagem to mollify her enemies and give her adherents a chance to rally in her behalf.

Finally, however, she stopped sowing wild oats thus promiscuously and publicly, took a house in the *quartier du Marais*, and, under Louis XIV., filled a more creditable though not less conspicuous place in Parisian society, surrounded by her brilliant circle of admirers.

Even punctilious St.-Simon paid tribute to her then: "Ninon managed with so much tact," says he, "that she not only retained the devotion of many most distinguished men, but she possessed the art of preventing them from clashing and quarrelling among themselves. Many a princess might have envied that respectful homage, that nice observance of the proprieties, which she strictly demanded and always obtained. Her influence extended to the court itself, and it became the rage to be admitted to her *salon*. At her receptions, the most fastidious taste could find nothing to censure. There was no gambling, no boisterous laughter, no quarrelling, no discussion of politics or religion. Delicate gossip, but without malice; literature, ancient and modern; now and then a glance at some recent act of gallantry, as was in vogue at that period; such were the staples of the lively conversation which she could adorn by her wit and temper by her all-pervading presence. Wonderful woman! She retained her pre-eminence long after personal charms began to wane! She could talk bewitchingly; she was discreet, disinterested, reliable, and sincere. Hence her remarkable reputation and extraordinary success."

Now let us find out, if we can, what she looked like, this Cleopatra of literature and fashion. Certainly some of her contemporaries can tell us. There are many pictures of her, and we may choose among them. Tallemant says: "*Strictly speaking, she never had much beauty*;" he must mean mere beauty of feature and regularity of outline, for Somaize tells us, in his big dictionary, "As to her beauty, though certainly she had quite enough to make people fall in love with her, it was by no means so potent a charm as her liveliness and wit. Many of her adorers, had they only seen and not heard her, might have gone away 'fancy free.'" An irresistible charm must have lurked in her conversation. As soon as she began to speak, voice, wit, and manner, all combined to complete the conquest her appearance had but begun. So, when she played on the lute, it was with more feeling than elaborate skill, for she maintained that the very soul of song was sympathy.

Mademoiselle de Scudery describes Ninon under the pseudonyme of *Clarice*:

"As to her appearance, she is of medium height, well-enough developed, and has an easy way about her that makes her popular everywhere. Her hair is the most beautiful chestnut I have ever seen; her face, round; complexion, brilliant; attractive mouth; lips like the inside of a ripe pomegranate, and a dear little dimple in her chin, that becomes her ever so much; bright black eyes, full of fire, but prone to smile, and a merry sprightly look, altogether betokening humor and intelligence combined. As to her mental qualities, she not only possesses wit of a high order, but she has the faculty of making it available among all sorts of people, particularly people who mix in society. She talks with facility, she laughs without effort, she knows how to derive pleasure from the merest trifles, and, when she happens to differ from her friends in opinion, she can carry on a merry little warfare with them, without hurting their feelings. Nevertheless, with all this capacity for unalloyed enjoyment, her well-balanced disposition is not untinged at times with a charming sadness, for her heart is very sensitive and tender. She can weep with afflicted friends, and desert her own pleasures to share the sorrows of others. She is unwavering in friendship, reticent and discreet when necessary, and careful never to embroil herself, in any way, in quarrels or scandals. She is generous and devoted in her impulses, while her great amiability has won for her the esteem of the first people at court, of both sexes, of every variety of disposition and character."

We must bear in mind, however, while reading this extraordinary tribute from Mademoiselle de Scudery, that Ninon could be something else than merely soft and amiable. If the glove was velvet, the nervous hand it covered had a grasp of iron, and could pat or crush at will. She could manœuvre her pungent wit, flash out sallies of exquisite humor, and make all her moods acceptable by the cheery joyousness of her disposition.

She was so lively at table, that some one said she got tipsy with the soup; but it must have been an intoxication produced by her in-

nate love of fun alone, for she drank nothing but water, and a drunkard was an abhorrence to her. Hard drinkers were never welcome to her presence.

Here are some of her *bon-mots* that sparkle yet:

"What a pity that wrinkles should not be all under our heels, instead of on our faces! It would be a much better arrangement."

The poor little Chevalier de Sévigné found himself seated, one day, between Ninon and Champmeslé, the comic actress. These brilliant women must have eclipsed the heavy little man, for Ninon said he "looked like a pumpkin fricassee in snow."

Once the Count de Choiseul wearied her with his inanities. He had just been promoted, and was exhibiting his fine clothes and decorations, admiring himself very much—too much for Ninon to endure with impunity, for she told him that, if he did not stop trumpeting the list of his honors and orders, she would be obliged to add to it a list of his friends and associates, who were notoriously not of the most creditable character.

At one time she was attacked with such a serious malady, that her life was despaired of. Her weeping friends gathered round the bed, and declared that they could not survive her loss. "Bah!" said she, with a flicker of her irrepressible wit, "I shall only leave dying people behind me, after all." This was in an age, be it remembered, when Charles of England, on his death-bed, could turn with a smile to the snivelling courtiers about him; and blandly beg pardon for being such an unconscionable time about dying.

Ninon seems to have talked, not because she disliked to keep silent, but because she had always something interesting or entertaining or agreeable to say. What would have been a stupid story in the mouth of any one else, became a lively comedy as it fell from her lips, so well could she personate character and voice.

Possessing all these charms and advantages, it is not astonishing to find Madame de Maintenon—then high in favor at court—writing from Versailles, and commending her brother to the good offices of M<sup>lle</sup>. de l'Enclos; "for," she adds, "suggestions from an amiable friend are apt to prove far more effectual than unpalatable advice from a sister."

As has been before stated, the letters of Ninon extant are few in number—about a dozen—and are addressed to St-Evremond.

We gather from some of them that, when he ran away to Holland, in 1661, she owed him a hundred pistoles. Eight years after, she still owed him the money, and he got rather tired of playing the creditor in exile, for he writes to her in Paris:

"I have not the slightest doubt of her good intentions; but you know my absence has been a long one, and it is so very easy to forget a friendship when remembering it may cost a hundred pistoles. Besides, poor human nature is so lamentably weak!"

St-Evremond did his fair debtor great injustice, nevertheless. At the first intimation she received from him, she told him that he could have fifty pistoles at once. This did not suit the banished philosopher; he thought himself treated too much like a lover, and too little like a friend, and took occasion to indulge in some witticisms on the subject, which were by no means pleasing to her. She promised to pay the rest of the money by a certain time, and, more exact than the Emperor Marcus Aurelius, who never would pay his creditors in advance, she paid the money before the time agreed upon.

"When you have well considered the matter," she writes, with considerable pride, "you will perceive how dangerous and impolitic a thing it is to bandy wit at the expense of your banker. My pleasures and position here have undergone a complete change, and you should know that I am now too much of a personage to be made a target for your jokes."

It was, in fact, about this period that she threw off the character of the wild Ninon to assume the more dignified position she ever afterward held as M<sup>lle</sup>. de l'Enclos.

St-Evremond, caught red-handed in his sin, was not a little ashamed of his ill-timed raillery. He hastened to repair the damage he had done, as we gather from a letter he wrote Ninon, in which he awards her the praise she deserves. As this letter is somewhat rare, here is an extract:

"With due submission to that venerable philosopher who asserted that no man should be esteemed happy before his death, I hold that you, in the full flush of existence, must yet be the happiest creature alive. You have enjoyed the love of the best men in the world, and have loved enough yourself to leave no pleasure untasted, but not

enough to feel ever clogged and worried by the entanglement of a waning, satiated passion. What other woman has carried enjoyment to such a pitch? Few princesses, indeed, but would chafe at their existence of ceremonious restraint, did they behold your untrammelled independence. Few saints in the cloister but would be happy to exchange their conventual tranquillity to enjoy your life of fascinating vicissitudes.

"The only sorrows you have ever known were those caused by love; and you must have experienced, of all persons in the world, how much truth there is in the poet's assertion—

"There's no pleasure in life that compares with love's woe."

"Now, you have passed the heyday of youth (forgive the expression; but you have written it to me so often yourself, that I do but repeat your own words), and yet your charms and talent would attract to your drawing-room, did you desire it, as brilliant an assemblage as ever crowded into a court to compete for the favors of Fortune."

The correspondence between St-Evremond and Ninon, though interrupted by wars and political events, was continued after they both grew old. Sometimes they regret their lost youth; sometimes they playfully banter each other about their advanced age. "I should like," she writes, "to pass what remains to me of life in your society, and, were you of the same mind, you need not be absent from me now." In fact, at this time St-Evremond might have returned to France, had he chosen. She twits him about it, too: "Perhaps, we are thus kept separate that you may have an opportunity of elaborating my epitaph."

St-Evremond recommended to her good offices a distinguished Protestant preacher, M. Turretin, and Ninon exerted herself to make Paris agreeable to the scholarly Calvinist. "I have introduced him to my friends here, and they declare that he fully merits the praises you lavished on him. If he desires the society of the few *abbés* who are here in the absence of the court, they will treat him with the attention due a friend of yours." (There seems to have been a number of brilliant *abbés* among Ninon's admirers toward the close of her life.) "I read your letter before him, *with spectacles*; they are rather becoming to me, as you know I always had rather a philosophical cast of countenance."

And so this amiable correspondence was carried on, from time to time. Ninon said she would like to go to England, to dine with him once more:

"Dinner—what a coarse incentive for a journey! And yet, notwithstanding the immense advantage the mind possesses over the body, the body has sundry little wants that continually assert themselves, and sometimes serve to divert gloomy reflections from the mind."

Their old friends began to drop off, one by one. Ninon lost Charles; St-Evremond had to mourn Madame de Mazarin.

"How sweet is the idea of Madame de Chevreuse," writes Ninon, to console him in his affliction, "that we shall meet all our friends in the next world!"

It is most affecting to read how their friendship lived on, having survived friends, youth, ambition, passion—every thing—till "that fell sergeant, Death," summoned them away too, and closed their remarkable career. A short time before her death, Ninon received the Abbé de Châteaufort, who begged permission to present his godson, a youth thirteen years old, and already known as a poet. It was Voltaire. She may have had some presentiment of the fame in store for the wonderful boy, for in her will she bequeathed him two thousand francs to purchase books. From Montaigne to St-Evremond, from Ninon to Voltaire—thus do the bright spirits of different ages clasp hands, and link the changing centuries together.

## JOHN LOTHROP MOTLEY.

JOHN LOTHROP MOTLEY was born at Dorchester, Massachusetts, on the 15th of April, 1814. His family, of English origin, has been settled since the seventeenth century in Massachusetts; his maternal ancestor, the Rev. John Lothrop, being one of the Pilgrim Fathers of New England. Young Motley received his education first at the Latin School, Boston; afterward at the academy at Round Hill, Massachusetts—an academy, it may be interesting to know, established by Messrs. Cogswell and George Bancroft. He then entered Harvard



University, where he graduated in 1831. After thus completing the prescribed course at Harvard, Mr. Motley visited the Old World. Having studied for a time both at Göttingen and Berlin, he travelled in Europe till the end of 1835, when he returned to the United States. There he studied jurisprudence, and, in 1837, became a member of the American bar. Literary pursuits had, however, to him a greater attraction than legal studies; and, in 1839, "Morton's Hope," a work of fiction from his pen, was issued anonymously at New York. This tale contains sketches of German university-life, grounded on his own experience, and also in part gives pictures of the war of the American Revolution. In 1841, Daniel Webster, then Secretary of State, appointed Mr. Motley Secretary of the United States legation at St. Petersburg; and, after a residence of about a year in the Russian capital, we find him again at Boston, busily occupied in contributing to the *North American Review* and other periodicals. As connected with his stay at St. Petersburg, we may mention that an article on "Peter the Great," which appeared about this time in the *North American Review*, is the product of Mr. Motley's pen. "Merry Mount," his second work of fiction, was published at Boston in 1849. The reader of "Merry Mount" will make acquaintance with Miles Standish, a character still more recently delineated by Longfellow.

About this time, Mr. Motley conceived the design of writing "The History of the Dutch Republic." Abandoning fiction and miscellaneous literary production, he gave himself wholly to the prosecution of his chosen task. Scarcely, however, had he entered upon his labors, which had for him an especial attractiveness and congeniality, when he was told that Mr. Prescott was also engaged in the same field. This information greatly embarrassed him, and all but arrested his progress. We have the circumstances connected with what proved to be an interesting episode in the history of literature, fully related in a letter written by Mr. Motley, then at Rome, on the day (February 26, 1859) on which he heard of Mr. Prescott's death. It was addressed to Mr. William Amory, of Boston, brother-in-law to the deceased historian, and is as follows:

"It seems to me but yesterday, though it must be now twelve years ago, that I was talking with our ever-lamented friend Stackpole about my intention of writing a history upon a subject to which I have since that time been devoting myself. I had then made already some general studies in reference to it, without being in the least aware that Prescott had the intention of writing 'The History of Philip II.' Stackpole had heard the fact, and that large preparations had already been made for the work, although 'Peru' had not yet been published. I felt naturally much disappointed. I was conscious of the immense disadvantage to myself of making my appearance, probably at the same time, before the public with a work, not at all similar in plan to 'Philip II.,' but which must of necessity traverse a portion of the same ground.

"My first thought was inevitably, as it were, only of myself. It seemed to me that I had nothing to do but to abandon at once a cherished

dream, and probably to renounce authorship. For I had not first made up my mind to write a history, and then cast about to take up a subject. My subject had taken me up, drawn me on, and absorbed me into itself. It was necessary for me, it seemed, to write the book I had been thinking much of, even if it were destined to fall dead from the press; and I had no inclination or interest to write any other. When I had made up my mind accordingly, it then occurred to me that Prescott might not be pleased that I should come forward on his ground. It is true that no announcement of his intentions had been made, and that he had not, I believe, even commenced his preliminary studies for Philip. At the same time, I thought it would be disloyal on my part not to go to him at once, confer with him on the subject, and, if I should find a shadow of dissatisfaction on his mind at my proposition, to abandon my plan altogether.

"I had not the slightest acquaintance with him at that time. I was comparatively a young man, and certainly not entitled, on any ground,

to more than the common courtesy which Prescott never could refuse to any one. But he received me with such a frank and ready and liberal sympathy, and such an open-hearted, guileless expansiveness, that I felt a personal affection for him from that hour. I remember the interview as if it had taken place yesterday. It was in his father's house, in his own library, looking on the garden. House and garden, honored father and illustrious son, alas! all numbered with the things that were. He assured me he had not the slightest objection whatever to my plan, that he wished me every success, and that if there were any books in his library bearing on the subject that I liked to use, they were entirely at my service. After I had expressed my gratitude for his kindness and cordiality, by which I had been in a very few moments set comparatively at ease—so far as my fears of his disapprobation went—I also, very naturally, stated my opinion, that the danger was entirely mine, and that it was rather wilful of me thus to risk such a collision at my first venture, the probable consequence of which was utter shipwreck. I recollect

how kindly and warmly he combated this opinion, assuring me that no two books ever injured each other, and encouraging me in the warmest and most earnest manner to proceed on the course I had marked out for myself.

"Had the result of that interview been different, had he distinctly stated, or even vaguely hinted, that it would be as well that I should select some other topic, or had he sprinkled me with the cold water of conventional and commonplace encouragement, I should have gone from him with a chill upon my mind, and, no doubt, have laid down the pen at once; for, as I have already said, it was not that I cared about writing a history, but that I felt an inevitable impulse to write *one particular history*.

"You know how kindly he always spoke of and to me; and the generous manner in which, without the slightest hint from me, and entirely unexpected by me, he attracted the eyes of his hosts of readers to my forthcoming work, by so handsomely alluding to it in the preface to his own, must be almost as fresh in your memory as in mine.

"And, although it seems easy enough for a man of world-wide reputation thus to extend the right hand of fellowship to an unknown and



*J. L. Motley*

struggling aspirant, yet I fear that the history of literature will show that such instances of disinterested kindness are as rare as they are noble."

Mr. Prescott's allusion to Mr. Motley's forthcoming work in the preface to "Philip the Second," above referred to, is as follows: "It is gratifying to learn that before long such a history may be expected (a history of the revolt of the Netherlands), if indeed it should not appear before the publication of this work, from the pen of our accomplished countryman, Mr. J. Lothrop Motley, who, during the last few years, for the better prosecution of his labors, has established his residence in the neighborhood of the scenes of his narrative. No one, acquainted with the fine powers of mind possessed by this scholar, and the earnestness with which he has devoted himself to the task, can doubt that he will do full justice to his important but difficult subject."

Stimulated by the generous encouragement of so renowned a fellow-laborer, and in the prosecution of his design, Mr. Motley in 1851 visited Europe, and in the great libraries of Dresden, Brussels, the Hague, and other cities, he gave the most thorough and painstaking examination to every authority, published and unpublished, that could throw light upon his theme. Accordingly, in his preface to "The Rise of the Dutch Republic," the first product of his labors, which appeared in 1856, the author was well entitled to say: "This work is the result of conscientious research, and of an earnest desire to arrive at the truth. I have faithfully studied all the important contemporary chroniclers and later historians—Dutch, Flemish, French, Italian, Spanish, or German. Catholic and Protestant, monarchist and republican, have been consulted with the same sincerity." He further adds: "I venture to hope that many years of labor, a portion of them in the archives of those countries whose history forms the object of my study, will not have been entirely in vain; and that the lovers of human progress, and believers in the capacity of nations for self-government and self-improvement, and the admirers of disinterested human genius and virtue, may find encouragement for their views in the detailed history of an heroic people in its most eventful period, and in the life and death of the great man whose name and fame are identical with those of his country." "The Rise of the Dutch Republic," embracing the heroic period to the assassination of William the Silent, was most favorably received in America and Great Britain, and warmly commended in both countries by the critics of the press. The expectation was fully realized which the author had ventured to express, that all who spoke the English language would regard with a peculiar interest the history of the great agony through which the Republic of Holland was ushered into life, being, as it was, a portion of the records of the Anglo-Saxon race, essentially the same, whether in Friesland, England, or Massachusetts. The work was reproduced in several of the Continental languages; the translation into French by Guizot was, with an introduction, published in Paris in 1859.

The high favor with which Mr. Motley's first historical work was received encouraged him to prosecute his task with renewed industry. In 1860, the first two volumes of the "History of the United Netherlands" were published; and in 1865 the remaining two volumes. It was his original intention in these volumes to carry the history of the Republic onward from the death of William the Silent to the Synod of Dort; but afterward he found it more convenient to stop short at the Twelve Years' Truce in 1609. It is his design, however, in a future publication, to trace the history of the Thirty Years' War, and to combine with it the civil and military events in Holland down to the epoch when that eventful struggle and the Eighty Years' War of the Netherlands were brought to a close by the Peace of Westphalia.

Soon after the outbreak of the Southern War the historian of the Dutch Republic was appointed American minister at Vienna—a post which he held until 1867. The facilities afforded, by this lengthened residence on the Continent of Europe, in making the necessary researches for his forthcoming volumes, would, we are sure, be turned to excellent account. Every one of Mr. Motley's numerous readers must desire to have the characters and exploits of Gustavus Adolphus, Wallenstein, and the other heroes of the Thirty Years' War, portrayed and recounted by his truthful and graphic pen. Once again in the United States after his return from Vienna, and settled in his home at Boston, in the congenial literary atmosphere of the place, Mr. Motley was called upon to give an address by way of celebrating the sixty-fourth anniversary of the New-York Historical Society. This address, entitled "Historic Progress and American Democracy," was delivered

at New York, to a vast assembly, on the 16th December last. "The name of Mr. Motley," said the president on that occasion, "belongs to no single country, and to no single age. As a statesman, diplomatist, and patriot, he belongs to America; as a scholar, to the world of letters; as an historian, all ages will claim him in the future."—The venerable poet, William Cullen Bryant, long resident in New York, at the close of the address also alluded in no less graceful terms to the distinguished historian, who, he said, "had made the story of the earlier days of the Dutch Republic as interesting as that of Athens and Sparta; and had infused into the narrative the generous glow of his own genius. He had thus the highest title to be heard with respectful attention by the citizens of a community which, in its origin, was an offshoot of that renowned republic. Most cheerfully had that title been recognized, as the vast audience assembled fully testified; and well had his illustrious friend spoken of the growth of civilization, and of the improvement of the condition of mankind, both in the Old World—the institutions of which he has so lately observed—and in the country which is proud to claim him as one of her children."

On the 13th of April last, the Senate rejected the treaty negotiated by Mr. Reverdy Johnson for the settlement of the Alabama claims; and Mr. Motley, as the newly-appointed minister to Great Britain, became heir to the difficulty. The announcement of his name as the successor of Mr. Johnson was received in England with much cordiality and good-will. His English extraction, his high personal character, the fact that he had before resided in England in the prosecution of his literary avocations, where he was well known and where he had made many friendships, his accomplishments as a scholar, his fame as an historian, all contributed to the hearty welcome accorded to him on his arrival.

## A SAIL!

IT was night in the golden summer,  
And we sailed the Indian seas,  
'Neath a cloud of swelling canvas,  
Before a favoring breeze,  
That wafted the good ship homeward,  
As it bent our taper spars;  
While the broad bright moon sailed o'er us,  
Through a sea of shining stars.

We stood on the deck, and watched her,  
As she felt the favoring gale—  
When the watch on the lookout forward  
Shouted, "A sail! a sail!"  
And straight on our larboard quarter,  
With a crowd of canvas set,  
We sighted a stately vessel,  
Where the sky and the water met.

Then down on the balmy breezes,  
And over the long sea-swells,  
Came floating, in solemn echoes,  
The sound of her clear ship's bells;  
So steered she, and so sailed she,  
Straight in our silver wake,  
With the white foam 'neath her forefoot,  
And each sail like a snowy flake.

On her deck there stood no mortal,  
At her peak there shone no sign,  
As she bowed before the trade-wind,  
And cleft the seething brine;  
Now rising, and now falling,  
Her taper mast-heads dip,  
While calm, in the flood of moonlight,  
Floated the phantom-ship.

But lo! as the night waned slowly,  
While the great, broad moon sank down,  
And the solemn stars dropped seaward,  
Like gems from her golden crown,

The sound of a silver whistle  
Swept down on the midnight airs,  
For the boatswain of yon strange vessel  
Was piping her crew to prayers.

As the moon's bright disk dipped lower,  
We heard her creaking brails,  
And the fair ship floated from us,  
As she furled her ghostly sails;  
And oft, 'twixt the night and morning,  
As we neared our rock-bound shore,  
We looked for the stately stranger,  
But no eye saw her more.

Happy the ship that meets her,  
Sailing from unknown lands;  
Freighted with unknown treasures,  
And steered by no human hands;  
Happy the bark that sights her,  
For she—the sailors tell—  
Will weather the storm and tempest,  
And reach her harbor well.

Swiftly our bark swept homeward,  
As a queen in her regal state,  
Till we ploughed the surging billows  
That roll through the Golden Gate;  
And, wherever that lonely stranger  
May sail the moonlit sea,  
Still I pray that soft airs may waft her,  
That a blessing may with her be.

EDWARD RENAUD.

### REPEATED AND PROLONGED VIGILS.

THE Abbé de la Caille, a famous astronomer, invented a kind of fork in which he adjusted his head, and thus passed nights in observation of the sky, without knowing any other enemies than sleep and the clouds, and without suspecting that there was a sweeter employment of those silent hours which revealed to him the harmony of the world. He contracted in this way an inflammation of the chest, which carried him off in a few days. The painter Girodet did not like to work in the daytime. Seized in the middle of the night with a fever of inspiration, he would rise, light lustrous suspended in his studio, set upon his head an enormous hat covered with wax-lights, and in this singular costume he would paint for whole hours. As might be expected, few have had more wretched constitutions or more dilapidated health than Girodet. Toward the end of his short life his genius seemed wedded to a corpse.

The cruel wakefulness that torments thinkers wears out life indeed with fearful rapidity, whether by shortening its duration or by diminishing its effective power. Vigils, while depriving the body of rest, overexcite the cerebral activity, augment that enormous expense of nervous energy made in the work of thought, and keep up a fluxion of blood to the head. They thus prevent repair of the waste of force, or at least oppose a complete restoration of power (since this requires in sleep a collapse of the brain by diversion of its circulating volume toward other viscera). Often, indeed, the thinker, wearied and overcome, leaves his work, to court sleep. But sleep shuns him, the wished-for calm comes not, the excited circulation of the brain continues. That cerebral tension, so much coveted in order to produce and to combine ideas, continues the master where it was invoked as the servant. At last, after the lapse of many wakeful nights, a restless, troubled sleep imperfectly repairs the forces destined to be again consumed. "Such nights abridge our days," says Bacon. How dear Nature makes us expiate our contempt for her laws and her lessons!

In the works of men of letters, of orators, and poets, every chapter, every paragraph, is the investment of a portion of their life. Goethe lived long, notwithstanding his immense labors, and yet the excitement of his brain, when at work, almost always led to accidents; the composition of each of his great works was followed by a malady. Woe to those imprudent vanities that would supply by a forced labor what Nature has refused them!

### HUNGARIAN REVENGE.

IN the chronicles of the Kings of Hungary occurs an account of a personal conflict between King Karl Robert, called the Magnificent, and one of his knights, which resulted in one of the most terrible instances of revenge on record. This knight was named Felician Zach, and after the death of Matthias Csak he had sworn fealty to Karl, becoming one of the most confidential of his friends and advisers. His daughter, the beautiful Clara, dwelt, as was the wont of the daughters of many of the nobility, at the court of the magnificent king, and it happened that the brother of the queen, Duke Casimir of Poland, while on a visit at Vissegrad, fell desperately in love with her. Deceiving her by a mock-marriage, which he persuaded her it was necessary should be clandestine, he only revealed her true position when on the point of deserting her to return to his own court, and Clara, overwhelmed with the disgrace of her position, complained bitterly to her father of the duke's treachery. Felician was furious at the insult offered to his house; and, finding that the violator of his daughter's honor had escaped him, he determined to revenge himself on the queen his sister, who, it appeared, had aided and abetted in the crime. He repaired to the palace, and, rushing frantically with his drawn sword into the room where the royal family were seated at dinner, he made straight for the queen. The king had risen, thinking his trusty friend had been seized with sudden madness, and, as he stood between Felician and his intended victim, he received a slight wound in the arm. The queen, anxious for the safety of her children, threw herself in front of them, and received a blow which cut off the four fingers of her right hand, on which Felician was seized, and literally cut to pieces by the servants.

The revenge that followed this outrage was fearful: no extenuation was allowed on account of the circumstances that had provoked it, and the whole family of Felician Zach was doomed to destruction. The fair Clara, the involuntary cause of the calamities that fell on her house, had reason to rue the "fatal gift of beauty" which had been bestowed upon her. She was seized by the emissaries of the king; her hands, ears, and nose, were cut off, and thus mutilated she was dragged, a public spectacle, through the town. Her sister perished by the hand of the hangman; her young brother was tied to the tail of a horse, which was then turned into the forest; her brother-in-law was starved to death in a dungeon, and the family property was confiscated, their descendants being excluded from holding any possessions for three generations. All this happened about the year 1330.

### THE LAST ŒCUMENICAL COUNCIL.

IT has been frequently said that history repeats itself—that is, certain men, placed under similar circumstances, and in analogous positions, act alike. The Council that will meet in St. Peter's, December 8, 1869, is a striking illustration of this truism. The last Council—that of Trent—was convened under similar circumstances. A new order had sprung into existence. Its cardinal tenet was blind obedience to the papacy. On every hand, the thoughts of men were aroused. In Germany, Luther had disavowed the religion of the people from Rome. England and Switzerland had disowned the pontiff. Everywhere there was disaffection and revolt. The Jesuits, anxious for the supremacy, instigated a Council. It was regulated by them. It combated progress and reform. To-day, the facts are similar. In 1864, the Jesuits instigated the convention of a General Council. Its aim was to protest against progress, and all the liberty of modern thought. The syllabus was put forth as the creed of the Vatican. It is to be dogmatized "for the extirpation of heretics," etc. And the parallel may be carried further. Trent was disowned by the Greek and other Eastern Churches; so is the Council forthcoming. The effect on the Eastern schismatics of the Bull of September 13, 1869, was very curious. The Greek Patriarch would not look at the letter, though it was handsomely bound in red morocco, and emblazoned with his name in gold letters. He had read it in the newspapers, and did not see how the Council could do aught but lead to further strife. The peace, once agreed on between the two Churches, had long since been broken. His mind was perfectly easy on the subject. And so the gorgeous volume was taken from the divan, and handed back to the delegate, who was bowed out, and departed in peace. The Metro-



politan of Chalcedon returned the encyclical, with the simple but expressive word, "*Epistrophe*," that is, Avaunt! The Bishop of Varna did not see how he could accept what his master had refused, and so he sent back the letter. The Bishop of Salonica declined, with five very pertinent reasons: 1. What would his patriarch say? 2. Why at Rome? 3. Because the pope wants to get us into his grasp. 4. The pope wears a sword, which is against Scripture; let him put it down, and disband his army. 5. Let him give up the *Filioque*, and there will be no more disunion. And so with the remaining Greek bishops; one and all declined the papal invitation.

We shall see that this was precisely the case at the former Council of Trent.

The nations held aloof then as now.

At this present time it is hard to say what power in Europe will yield ready obedience to Rome. M. Baroche, the French Minister of Justice and Worship, declared, July, 1868, that the French court repudiated the syllabus, and prohibited its promulgation. It would not admit the infallibility of the pope. The Archbishop of Paris, in a recent pastoral—October, 1869—declares that the concordat is opposed to the recognition of the infallibility. Spain, once blindly obedient, has declared for freedom of worship. Austria has torn up her concordat. Bavaria has declared against the probable issues of the Council. Under such circumstances, the Council, supposed to represent all nations, will assemble.

Let us turn to the history of Trent.

In his conflict with Leo X., in whose gorgeous cathedral the new Council is to assemble, Luther had appealed to a general council. He supposed that such an assembly would not be the mere mouthpiece of one man. It was sought to make it so at Trent, and the organ of the Roman court—the *Civiltà Cattolica*—asserts that this present Council is "not convened for discussion." Further, the abuses in the Roman court, and throughout the Church generally, raised a loud and persistent cry for reform. But the profitable nature of these abuses induced those who perpetrated them to delay the evil day of reformation as long as possible. Consequently, the Council was not convened till December 13, 1545. It met at Trent, a city in the Tyrol. It had small right to the title of "Ecumenical," for it represented but a small minority even of the Romish Church. The whole Eastern Church denied its authority, and refused participation in it. The most eminent scholars of the time derided it. No Protestant dared venture near it, for the fate of Huss and Jerome of Prague were fresh in memory. Yet then, as now, they were invited "*occasione amplexantur hujus concilii*." Paul III. was jealous of the influence of Charles V., whose diplomacy and prowess had subdued all Germany. Especially as Spain and Austria were the only nations represented besides Italy. In all these countries there had waged a cruel war against free opinions. The Inquisition, newly organized, had carried on its terrible work with unrelenting zeal. Italy was subdued, and Germany was timid, although supporting Luther and Melancthon.

The number that responded to the papal Bull of Convention was so small as to merit the contemptuous epithet of Queen Elizabeth, who called it "a popish conventicle." Only four archbishops, twenty-two bishops, five generals of orders, and representatives of the Emperor and the King of the Romans, answered to the muster-roll. The pope was represented by three legates—all famous men—the Cardinals Del Monte, Cerino, and Pole, afterward Archbishop of Canterbury; also by two Jesuits—to which was added a third—Laynez, Salmeron, and Le Jay. They were the most active members of the Council. The enlightenment of its members was not considerable. They were quite ignorant of the Fathers, and, with the exception of Pole and Bellarmine, not very well acquainted with theology. The Cardinal Pole represented the moderate and reforming party. The bells of the various churches and the booming of cannon ushered in the morning of the Council. The procession, clad in gorgeous vestments, entered the council-hall to a solemn chant. Then the prayers of the Christian world were invited on behalf of the Council. The members then, one by one, according to rank, approached the papal throne, and did homage. The organ then pealed forth, and the high-mass of the Holy Ghost commenced. In the middle of the service, just before the consecration, all the assembly kneeling, the celebrant intoned the "*Veni, Sancte Spiritus*," which the whole congregation took up and sung. Then, at the conclusion of the mass, a general absolution was pronounced, and the president commenced the Litany of the Saints, three times repeating the petition, "*Ut hanc sanctam synodum, et omnes*

*gradus ecclesiasticos benedicere et regere digneris*." Then the following question was put to the assembly: "Does it please you, to the honor and glory of the holy and undivided Trinity, the Father, the Son, and the Holy Ghost, to the increase and augmentation of the faith and the Christian religion and the extermination of heresy, the peace and unity of the Church, the improvement of the clergy and all Christian people, to the suppression and extinction of the enemies of the Christian name, to resolve and to declare that this Council do commence and have commenced?" To which the members replied, "*Placet*." Then the glorious "*Te Deum*" rolled through the cathedral to the full diapason of the organ and the music of a splendid band.

The Council then proceeded to business. Father Laynez acted as referee on questions relating to the Fathers. All efforts of Pole to bring about reform were crushed by the Jesuits. Nothing but extreme measures were adopted. The speech of Salmeron, of the Society of Jesus, was most virulent and bitter, and represented the spirit of the Council. They succeeded in carrying the doctrine of passive obedience to the papacy. Meanwhile, the division between the pope and the emperor had become more serious. The victory of Mühlburg gave rise to reasonable apprehensions that the Council would become entirely under the influence of Charles V. if it remained long at Trent. The breaking out of the plague in that city was made the pretext for transferring its session to Bologna. The transfer was vigorously opposed by the bishops in the Spanish interest, but, after two years of session, the Council dispersed to meet at Bologna, March 15, 1547. The opposition to the transfer occasioned delay in the reassembly, and in the interim Paul III. died. He was succeeded by the Cardinal del Monte as Julius III. He reassembled the Council at Trent once more, May 1, 1555. Shortly afterward, the passes of the Tyrol fell into the hands of Maurice of Saxony, and, apprehensive of danger, the Fathers suspended the Council for two years, after several sessions. The suspension continued, however, nine years. Julius died in 1555, and was succeeded by the Cardinal Corvino as Marcellus II. He reigned but a very short period, and Paul IV. succeeded him in the same year (1555). This year saw vast changes in England, where the Reformation was triumphant. But, on the Continent, the troubles contingent on the retirement of the emperor into a monastery, the incapacity of his son Philip, and the increase of the Reformation in Germany and Switzerland, caused the greatest alarm at Rome. Pius IV., in 1559, commenced the seventeenth session. The Council mustered at this time one hundred and two Fathers, and was presided over by the Cardinal de Gonzaga. More was done in this session than in any previous one. They decided on the sacrifice of the mass, denied the chalice to the laity, pronounced tradition as equal in authority to Holy Scripture, that flagellation and self-inflicted tortures were acceptable to God and a means of grace—they decreed the celibacy of the clergy, various enactments touching holy orders, marriage, etc. These discussions lasted through seven sessions, till November 11, 1563. After sitting for eighteen years in the midst of terrible wars and horrible anarchy, this ill-starred Council dissolved, amid the universal derision of Protestants and thoughtful Catholics. Its decrees were approved on December 4, 1563, by a total of two hundred and fifty-two members, to wit: six cardinals, twenty-five archbishops, one hundred and sixty-eight bishops, seven abbots, seven generals of orders, and thirty-nine proxies of bishops. They were confirmed by the pope, January 10, 1564. From them he gathered his famous creed, which is now used as a test of the faith of all converts to Rome.

By a strange parallel, the Council found a vehement enemy in Fra Paolo Sarpi, a Servite monk, as the approaching Council does in Père Hyacinthe, who protests against "the things which are Roman, but not Christian." Sarpi vigorously denounced the Council in his history of that assembly. Its worst enemies among Protestants could say no more than was said by this Servite monk. He calls it a factious assembly, designed only to spread the Inquisition and the power of the papacy, a cruel band of persecutors, into whose hands no Christian could trust himself, in theology corrupt and unscriptural, its policy cruel and persecuting. Sarpi's life was afterward attempted by assassins, and it is believed at the instigation of the Jesuits, whom his history especially attacked.

Thus the points of resemblance between the last so-called Ecumenical Council of Trent and the approaching Ecumenical Council of Rome are many and striking. At the first, free discussion was intended. But it will scarcely be possible, at this age of the world, to

gag free opinion now. And if the last article of the syllabus, which arrays the papacy formally against progress, liberty, and civilization, is carried, the more opposition it encounters, the better for the Church.

## EGYPT AND THE ISTHMUS OF SUEZ.

THE exceptional rôle enjoyed by Egypt, from the earliest times in the history of the world, was as much owing to her geographical situation as to the marvellous fertility of her soil. Being the key of the passage between the East and West, the interests of commerce have instinctively attracted to her the attention of every civilized nation.

There is not a single great empire of antiquity, nor a modern state of any importance, that has not endeavored to take advantage of the admirable resources of transit which it has always offered.

No country is richer in historical associations than the land of the mighty Pharaohs, which teems with the memories of Joseph, Jacob, Moses, Cambyeses, Sesostris, Necho, Darius, Alexander, Pompey, Cæsar, Octavius, Trajan, Adrian, Saladin, Bonaparte, Mehemet Ali, etc.

First in the march of science and civilization, as if conscious of her destiny, Egypt from the earliest times adopted the most ingenious and certain means of perpetuating her history and traditions, by engraving them in indelible characters upon the walls of her monuments, whose imposing ruins, to the latest ages, will be objects of wonder and amazement.

The Isthmus of Suez, to which so much interest is at present attached, likewise attracted the attention of the ancient Egyptians, and witnessed some of their noblest undertakings.

The first idea of opening a canal of communication between the Mediterranean and the Red Sea, by taking advantage of the Pelusian branch of the Nile from Avaris to Bubastis, and rendering the irrigation canal navigable, which went from the latter city to Heroopolis, is attributed by some to Sesostris, who reigned in the twelfth century before our era. It was, however, reserved to Necho, who reigned in the sixth century before our era, to render this idea an accomplished fact.

The canal of Necho began at Bubastis, and terminated in the neighborhood of Heroopolis, broad enough to admit of two triremes going abreast, with a uniform depth of three yards; it was consequently sufficient, in all respects, for the wants of the period.

As regards the total length of the canal, Pliny the Elder estimates it at fifty-eight miles between the extreme points, or at one hundred miles, including the turns it took in following the windings of the valley it traversed.

Herodotus asserts that one hundred thousand men perished during the course of the canal's construction.

While taking into consideration this heavy bill of mortality, we must remember that myriads of men were employed in constructing this canal, and obliged, with the limited means at their disposal, to excavate twenty millions of cubic yards of solid matter.

Vessels could thus reach Bubastis from the Mediterranean by ascending the Pelusian branch of the Nile, and continuing their course on the canal of Necho, from that city to Heroopolis, near the modern Suez, made the passage of the isthmus, from sea to sea, traded along the shores of the Red Sea, etc., and returned westward laden with the produce of the East.

Then followed a period of civil wars, which desolated Egypt during the reign of the four monarchs succeeding Necho, which only ended in the Persian invasion and conquest of the country under the renowned Cambyeses.

As a necessary result of those troubles, commerce languished, the arts of peace were neglected, the accumulations of sand barred the passage from the Heroopolite Gulf to the Red Sea, and the canal, having fallen into disrepair, became useless as a mode of transit. Darius, the successor of Cambyeses, however, with the desire of raising the fallen fortunes of the country, ordered the sand-bank to be removed, and repaired the broken banks of the canal.

Traces of the banks reconstructed by Darius were lately discovered, extending about ten miles, several of the large stones, having cuneiform inscriptions, attesting that they were laid during the reign of that monarch.

Alexander the Great, who first ordered surveys to be made of the Black Sea, the Red Sea, the mouths of the Euphrates, and the Persian

Gulf, was the first who extended commercial relations from Greece, *via* Egypt, to India direct. His idea in founding Alexandria was to render it the natural entrepot between the East and West, and the great projects he formed for putting it into direct communication with the Red Sea, but which he did not live long enough to execute, prove the importance he attached to the maintaining of this route of transit. In the division of the provinces after his death, Egypt had the good fortune to fall into the hands of Ptolemy, who added to his possessions Syria, Palestine, the Isle of Cyprus, and Libya, developed the internal resources of Egypt, created a powerful fleet, and spent his life in planning and accomplishing works of public utility, which rendered Egypt the most prosperous nation of the age he lived in.

His son, who worthily succeeded him, greatly improved the canal of Necho and Darius, removed the sand-banks, deepened and widened it at intervals, established, for the first time, a regular succession of sluices, and thus maintained a regular and uniform depth of water; the result of those wise efforts was a prodigious increase of traffic through the isthmus, which justified the great projects and calculations of Alexander.

After an interval of two and a half centuries, the existence of the canal is brought prominently into view by the naval combat between Octavius and Antony at Actium. Antony, after sustaining a defeat, accompanied by Cleopatra, endeavored to save the remaining vessels of his fleet by transporting them through the isthmus to the Red Sea. According to tradition, the remnant of the fleet ascended the Pelusian branch of the Nile to Bubastis, traversed the canal of Necho, but did not find water sufficient in the Bitter Lakes (*Lacs Amers*), and were there pillaged by the Arabs, who at that time made frequent incursions into Egypt.

After the Roman conquest, Octavius developed the resources of the country by applying a series of wise and liberal measures, and so far succeeded in restoring prosperity that Egypt became the storehouse and granary of Rome, and paid more tribute into the imperial treasury than any six other provinces.

Under the reign of Trajan, after a terrible famine had scourged the land of Egypt, he ordered vast projects of canalization to be executed, to be used for purposes of irrigation, and to prevent the return of similar calamities.

The canal of Necho, Darius, and Ptolemy, was also partly improved by Trajan and his successor Adrian, but the immense accumulation of sand at the entrance of the Red Sea created an obstacle to the free navigation of the isthmus, which was never completely removed.

In the years 638 to 640 of our era, when Egypt was conquered by the Mohammedans under Amrou, in the name of the Caliph Omar, great works of canalization were undertaken by Amrou's orders.

Having governed this country until 662, he seems also to have attempted to render the old canal navigable, and to have partially succeeded in accomplishing his project in the short space of one year, the canal for some time afterward being called the Canal of the Prince of the Faithful.

This famous canal, the work of so many generations, the object of so many hopes and projects, was at last completely destroyed by the Caliph Abbasside-Abou-Giaffar-el-Mansour, in the year 767, for the sole purpose of reducing by famine the city of Medina, in which his uncle, Mohammed-ben-Abdallah, had organized a revolt against him.

After the destruction of the canal, the surrounding country, being deprived of the means of irrigation, soon became a desert, and the whole isthmus was finally abandoned by its original inhabitants to the wandering descendants of Ishmael.

The idea of reconstructing the old canal, or creating a new, was revived by M. Lepère, the head engineer of the French army which landed in Egypt, commanded by Bonaparte, in the year 1798. M. Lepère traversed the desert in all directions, examined the remains of the ancient canal, and spent three years and three months in making his investigations, the result of which he communicated to Bonaparte in his celebrated report.

His plan was to form a canal composed of six parts:

1. From Alexandria to Ramanyeh, a city situated on the estuary of Rosetta.
2. From Ramanieh to Boulak.
3. From Boulak to the wady called the Canal of Cairo.
4. The canal of the wady ending at Serapeum.
5. Basin of the Bitter Lakes, from Serapeum to the approach of Chalouf.

## 6. From Chalouf to Suez.

It is needless to say that the evacuation of Egypt by the French army put an end to the projects of M. Lepère.

The possibility of creating a canal, sufficiently deep and wide to admit the largest vessels, was asserted by Mr. MacLaren, in 1825, in *Jamieson's Journal*; by the *Quarterly Review*, in 1836; by a company of British officers, who traversed the isthmus, in 1840; by M. Linant de Bellefonds, in 1841; by M. David Urquhart, in 1843; by Prince Metternich, in 1846; by M. Paulin Talabot and M. Enfantin, in 1847; by Messrs. Alexis and Émile Barrault, in 1856; and by M. de Lesseps, in the same year.

The labors of M. de Lesseps, in accomplishing the great work to which he has devoted so many years of his life, are so well known, that they do not need to be enumerated.

Besides constructing his famous canal, M. de Lesseps has also the satisfaction of witnessing the creation of three first-class ports on the banks of his canal, viz.: Said, Ismailia, and Suez. Projects of irrigation on a grand scale are reserved for reclaiming and cultivating the desert; and the country that, to within a recent period, was abandoned to roving Arabs, will, within the lifetime of this generation, be covered with towns and villages, possessing all the accessories of modern civilization.

## SUNSHINE DOMESTICATED.

**A**Ll that lives upon Earth hails the Sun as its father, and his disappearance from the scene of Nature would be equivalent to our own. Perhaps, even of the two, it is man who would be least missed, accustomed as he is to regard the Sun only as a temporal convenience.

Fortunately for us, the Sun is not easily put out of temper by our impertinence, and never has thought it a derogation from his dignity to condescend to the humblest uses.

Salomon de Caus, one of those audacious inventors of the seventeenth century, who translated magic into science, well appreciated, in his *Raisons des forces mouvantes*, the powers engendered by the action of heat upon water in close vessels, and has left us the plans and drawings of a pump worked by the Sun.

Our knowledge of the solar force only needed, in order to be fruitful, that the attention of practical engineers should be properly directed. It has hitherto been engrossed by the employments of fire, requiring supplies of combustibles.

The Sun, all this while, has not limited his action to forming combustible matter in the plants which nourish animals, or which, in exuberant periods, were stored away in our coal-deposits. Still, as before our appearance on the stage of creation, the Sun gives birth to the winds, dissipates the waters, gives them a fresh circulation in the aerial ocean of cloud-rack, and vapors, renewing rivers at their mountain-sources, and impelling, within the revolutions of his planet-group, those of all their elements, from the tide-pulse to the chemic play of atom loves.

But, if we can trace back to the Sun all movements upon the Earth, these are mostly of an indirect character, and effected through a series of transformations of movement. It remains, then, open to genius, to cultivate a closer intimacy with this great power. Archimedes proved this in setting fire to the enemy's ships with burning lenses; and Buffon, who, among others in the last century, sought to reproduce this invention, set a tarred board on fire at fifty metres' distance. It was curious, but little else. Saussure's experiments took a more instructive, though less brilliant direction. He set traps for sunbeams with pine boxes, which he arranged with glass covers in the sunshine, so as to accumulate heat up to 160° C., a phenomenon which could not then be accounted for, but which our modern analyses of the solar ray explain. We distinguish, for instance, the heating rays from the lighting, and from the chemical rays, and know that each behaves in a way of its own with transparent bodies. Some readily traverse one, two, three panes of glass; others, after passing the first, are stopped at the second or the third. It happened, then, that a part of the rays which had penetrated Saussure's pine box, could not get out again, but were imprisoned within the glass.

Sir John Herschel carried these experiments on farther, at the Cape of Good Hope, and now M. Mouchet, repeating them, has been operating with a very simple apparatus, a kind of stew-pan, with a glass cover and a cylindrical metallic mirror as reflector.

With sunbeams alone, he has stewed meat and vegetables, and distilled wine. His roast beef had at first an unpleasant taste, as if kept too long, which was due to the chemical rays of the spectrum, but this inconvenience was obviated, by intercepting these chemical rays with a plate of red glass.

We readily conceive the interest of these culinary applications in the Libyan and Arabian deserts, where immense tracts are destitute of combustibles, and even in Egypt, and other fertile countries despoiled of their forests by the ravages of war or improvident cultivation. Still more extensive are the promised uses in evaporation, distillation, and refining.

M. Mouchet demonstrates the possibility of using the solar heat also directly, as a motor for machinery. His pump, working by itself in the sunshine, may enable borderers of the desert and farmers of all countries, liable to suffer by drought, to make the Sun, which parches, also irrigate their soil. Our ingenious apparatus for producing ice by heat will work perfectly well in the Sun.

Inventors are now endeavoring to perfect a solar steam-engine, which Ericsson thought he had discovered. The substitution of volatile liquids, like ammonia or ether, for water, favors combinations in which the Sun would act as focus. M. Mouchet's book, "*La Chaleur Solaire et ses Applications Industrielles*," in which all the sides of this question are examined, is a valuable guide.

## LITERARY IMMORALITY.

**O**F all the agencies which act upon society, for good or for evil, perhaps the most subtle and powerful is that of literature. Influencing men both through the intellect and the feelings, directing their thoughts, and coloring their views, it exerts a powerful control over the conduct and life. That this agency should adapt itself to popular conditions—should vulgarize and degrade itself in appealing to a low and uncultivated constituency—is inevitable as things are; and that it should, at the same time, put forth lofty pretensions to refinement and purity, is also natural. That there should be a cant of literary morality, and excessive boasting about the high-toned and elevated character of literary productions, is quite to be expected—is but the ordinary trick of business resorted to in proportion to the unscrupulousness of the course pursued.

But what is the real quality of this high-toned literary morality, of which so much is said? In the literature of the widest circulation and the largest influence, morality simply means decency. If an author avoids grossness in his pages, or an editor keeps his columns clear of indecency, the noisiest claims are immediately put forth on the score of virtue and morality. With these—and their name is legion—the high-water mark of meritorious morality is bare abstinence from foulness. They would not, "for a million dollars," permit an allusion that would bring the faintest blush to the cheek of modesty. But decency, although a part of morality, is only a minor and negative part, and is, besides, consistent with the grossest immorality. A man may scrupulously abstain from coarseness and obscenity, but, if he is a notorious liar, he is very far from being a moral man. And so a literature may be free of every thing like indelicacy, and yet may be so false to life, and so pervaded with untruthfulness, as to be thoroughly immoral and pernicious in its influence. That human character and the social relations, as presented in popular novels and in the current drama, are so exaggerated and distorted as to give rise to false impressions and misleading views of life in the minds of the young, is not to be questioned; and that these presentations, in proportion to their falsehood and extravagance, their morbid sentimentality, and their stunning sensationalism, are mischievous and immoral in their influence, is equally undeniable. Morality has reference to the good and evil, the right and wrong of human actions, and it is the office of moral education to familiarize the young with the good and evil consequences of human conduct as realities of experience, and as regulated by law. But what avail such inculcations so long as the youthful imagination is dominated by an absurd and ex-



travagant literature, in which the very aim is to produce such startling distortions of character and such outrageous perversions of social reality as shall start the pulse and excite the brain by the very violence of its contrasts with truth? The independent press should take up this subject with the seriousness which is due to its importance; the *Saturday Review* has done so, and we are glad to see that it does not flinch from making its applications to brilliant sinners. We quote a portion of its argument:

"It is curious to reflect how much an author may do to corrupt the heart or the head, and how he may, nevertheless, so long as he does not sin in one point, escape all censure. If he can only keep his book free from what is called immorality—that is to say, if he can either ignore one side of human conduct altogether, or else only touch upon it in the recognized conventional manner—he may give his readers the falsest notions of human life, he may pervert their taste, he may render them as weak as sentimentality alone can render them, he may lead them to relish nothing that is not seasoned with the most outrageous incidents and coincidences, and he may still remain an author whose works would be placed by any mother in the hands of any daughter. It is strange how blind the respectable world usually is to all literary faults save one. So long as a book is not licentious, it is held that it cannot be a bad book. We are inclined to question, however, whether that which corrupts the intellect does not do as much harm as that which corrupts the so-called morality.

"We cannot allow that a book or a play is harmless because it is not immoral. The tendency not only of the stage, but also of a great deal of the literature of the present day, is to give people a thoroughly false idea of life. It is scarcely possible to overestimate the harm which is done by a literature which, even if it does not grossly offend on one point, is nevertheless utterly wrong on all other points. Our novels, with their sickly sentimentality, their morbid self-analysis, their hateful sensationalism; help to train up a set of young men and young women quite unfit for the humdrum duties and pleasures which must constitute the greater part of each one's life. Even if many of our novelists may claim that exalted praise which, as we learn from the advertisements, has been so generally bestowed on a late author, and if, as it was said of him, that 'his works are not calculated to raise a blush on the most sensitive brow,' it may in like manner be said of them, Shall mere abstinence from indecency be a set-off against utter ignorance of human nature? It is not merely the rank and file of our novelists who offend. Their tendency is now, as it always has been, merely to exaggerate the errors of their chiefs. There is not one of our leading novelists who has not much to answer for, and we hardly know on whom we should lay most blame. Mr. Dickens, perhaps, ranks as the chief offender, for he it is who has worked sentimentality to such an extent as would have raised, if that were possible, a blush even on Sterne's brow. When the author of 'The Sentimental Journey' was going to play his tricks on his reader's eyes, at all events he chose as his subject a jackass, and a dead one, too. If death is to be tricked out so as to work upon our emotions, if it is to be constantly drawing upon our tears, we must confess that, for our part, we feel less after-shame at the tear we dropped over the defunct donkey than at those we have shed in turn over Mr. Dickens's long line of dying heroes. At all events, the Rev. Mr. Sterne only killed his donkey once; while Mr. Dickens will never once for all kill off his favorite character—his half-idiot or his sickly child—and so get done with him. We confess that, whenever we have begun one of Mr. Dickens's novels, we have not felt quite easy in our minds till we have been able to discover which character it is that has been brought into this world solely with the view of being speedily ushered out of it. His children, from Little Dombey downward, might fairly rise up against him with the old reproachful question of the tombstone—

'What was I begun for,  
To be so soon done for?'

To Mr. Dickens the whole modern sentimental school most certainly looks up as its head. He has been the source of a great deal of most tearful writing; might we suggest, if he stands in need of a motto, that *Hinc illa lachryma* would be most appropriate? Mr. Thackeray himself is not free from the same charge. He saw how easy the tear-trick was to perform, and what applause greeted his great rival each time he repeated it; unhappily, he could not keep from trying it also. At imitation, of course, Mr. Thackeray was perfect, and we must allow that Colonel Newcome's death quite equals, if it does not actually sur-

pass, Mr. Dickens's most lachrymose efforts. If Charles II. had lived nowadays, he would scarcely have thought it needful to apologize for being a most unconscionable time dying. The fashion has changed, apparently, since his time, and few can now get their dying done under half a dozen pages or so. We altogether protest against these death-bed scenes; we have had enough of them, and more than enough. Henceforth, if a man has to die, let him, like a wounded wild animal, creep off to some hiding-place where he may pass out of the world with dignity and alone. We have, unhappily, every year to read and to criticise a great many novels. We give fair notice that we will not tolerate any more death-bed scenes, any more last dying speeches. Even our very executions are now private. Now that Jack Ketch does his business with dignity, it is not too much to expect that our novelists should show some little respect both for themselves and for their readers. We hold that this overstrained sentimentality, so far from widening and strengthening a man's sympathies with his fellow-creatures, really narrows and weakens them. The reader is so flattered by the tear he drops over the imaginary sorrow of some hero or heroine, that he cannot but congratulate himself on the possession of a tender heart. His conscience remains satisfied with the sympathy he has felt for sufferings which have had no real existence, and his charity has been sufficiently exercised in the aid he longed to bestow on those who by no possibility could have been the recipients. The older novelists taught a coarser but a more practical charity. They drew fewer tears, no doubt holding the belief, economically unsound of course, that it was better that their readers, every time they came across distress, should learn rather to draw a guinea from their pockets than tears from their eyes.

"Mischievous as is the sentimental school, the sensationalists have quite as much to answer for. One, indeed, has naturally led to the other. The mind had become enervated by a long course of sentiment, and after its tearful mood sought for excitement. Excitement was soon provided, and in vast quantities. The grand discovery was made that the novelist's trade requires no apprenticeship of any kind, no study of human nature, no skill in delineating character, scarcely any knowledge even of the language which is used. The novelist alone, like the king of old, might claim the high appellation of Super-grammaticus. When these discoveries were once made, a vast number of people found that all along they had been great novelists, though hitherto only in a latent state. They found that all that was necessary for the composition of a successful story was to refresh their memory of the Church Catechism, and, keeping the duty to one's neighbor before their eyes, to introduce as many incidents as they could where the various precepts of that admirable composition were outrageously violated. With these spiritual excesses were to be combined material extravagances; with robberies, adulteries, rapes, and murders, were to be mingled burning houses, railway collisions, earthquakes, and explosions. Meanwhile the appetite for excitement must be kept up by a repetition of the old tricks of sentimentality, and, as in the older novels, young girls, half-idiot, or repentant prodigals, must be brought in, so that they might be put to a slow death in about the middle chapter of the second volume.

"How debasing is the effect of these miserable productions, which pour forth almost daily from the press, it is impossible to tell. Nor would it be easy to form any estimate of the numbers of those to whom novels form the chief mental food. Their effect on women, at any rate, can scarcely be exaggerated. We can only hope, for their sake, that the day may come when, if they are still excluded from a great many wise and witty writings, because indelicacies are contained in them, they may at all events be debarred from those monstrous novels and plays which, even if they are free from all grossness, nevertheless render the mind weak and restless, and therefore lay it open to the approach of even worse evil."

#### A NEW PHILOSOPHY OF HEAT.

WE receive many communications propounding new views of the universe—wholesale and retail. The American mind is marvellously fertile in this respect. If science requires only the enunciation of "new views" of things, then it is bound to advance on this continent at a rate unparalleled. For, is not this a great country, and, one man being as good as another, is not his opinion just as good as any other man's opin-

ion? Otherwise, what is the use of equality? Besides, is not science progressive—a constant abandonment of the old, and a passage to the new? Therefore are we raising up a multitude of “independent thinkers,” who brush away old views as cobwebs, and give you a new system with as little trouble as they would cook a dumpling. It is interesting to behold the self-complacent young republican reformer (product of our free institutions, you know), who, having tried his hand with serene satisfaction at the problem of political reconstruction, is ready to reconstruct your astronomy, your geology, your physics, your religion, your family and social relations, or whatever else is deemed capable of amendment. He is no old fogey, no slave to the past, no mumbler of old formulas; he postulates himself—it is the year one, and he goes forth to the making of a new heaven and a new earth, as the vocation to which he has been called from the foundation of the world. We were recently bored, beyond the power of language to describe, by a long-haired, seedy reformer, who, beginning with abolitionism, and fighting his way to mental independence through spiritualism and phrenology, discovered his mission at last to be, to subvert every essential proposition of the Newtonian astronomy.

The last demonstration of the American mind in its most congenial direction comes to us in the shape of a declaration of independence concerning the philosophy of heat. As to what this universal force of Nature is, it has not been easy to determine. As it seems to enter bodies, and escape from them, it was long thought to be a kind of subtle ethereal matter, without weight, and was called caloric. But it was at length found that, under certain circumstances, it seems to go out of existence altogether, and, as this idea was inconsistent with the notion of its being matter, the materialistic hypothesis was gradually abandoned, and there grew up in its place a *dynamic* hypothesis, by which heat was regarded as simply a form of force. Force is known only by the changes or motions which it produces in matter. Heat-force, therefore, came to be regarded as one of the *modes of motion* in matter.

This view of the nature of heat, which is now entertained by the scientific men of all countries, was expressed with great precision two hundred years ago by John Locke. He said: “Heat is a very brisk agitation of the insensible parts of the object (heated), which produces in us that sensation from which we denominate the object hot; so, what in our sensation is *heat*, in the object is nothing but *motion*.” According to this notion, when a body is heated it acquires from some source a force which increases the internal motion of its particles; as it cools, these particles lose motion, and the force escapes. It matters not what may be the source of heat, whether the sun, terrestrial combustion, or mechanical friction, the essential phenomena are held to be the same. All kinds of matter, solid, liquid, and gaseous, are capable of being heated and cooled, and, indeed, are actually at all times undergoing one or the other of these changes; and in all cases this heating or cooling is held to be simply a loss or gain of molecular motion. This view has besides been sharply contested at every step, and has only reached its present general acceptance as the result of a wide range of experiment by thousands of investigators during the last hundred years.

But all this is of small account to our correspondent; he has a theory of his own, and thus opens his statement of it:

“Heat cannot be generated in a vacuum. It cannot, therefore, be motion and *nothing else*: for, if it were, its intensity would depend upon the *violence* of the motion and *nothing else*, whereas it cannot be produced in a vacuum by motion, *however violent*. Atmospheric air being necessary for the production of heat, the something else other than motion necessary is the air or *something in it*. Perfectly dry air is ‘a practical vacuum as regards the rays of heat.’ Therefore the *moisture* in the air must be the something else or contain it. It is not, of itself, the something, and must contain it. This moisture is aqueous vapor, and is composed of oxygen and hydrogen. Oxygen is a supporter of combustion, but not combustible; hydrogen is combustible,

but not a supporter of combustion. Neither one *alone* of these elements can, therefore, be the something else referred to—it must be *both together*. Heat cannot be the motion of the particles of these elements, one upon another, or one from another, for *uncombined* hydrogen is not found in the atmosphere. It must, therefore, result from their motion, one into another, that is, from their *chemical union*. Motion is a simple *accompaniment* of the union, is *antecedent* to the union and to the production of heat, and is no more heat than vapor or water is heat. This conclusion (that heat is a result of the union of oxygen and hydrogen) is fortified by the fact that these elements are sufficient in amount, when taken cosmically, to produce all the heat in the universe.”

Now, to say that all this is a tissue of gross errors and misapprehensions, is to characterize it very mildly. The first statement, that “heat cannot be generated in a vacuum,” is false. Not only can heat be generated in a vacuum, but it was just this experiment, made by Sir Humphrey Davy more than fifty years ago, which led him to the abandonment of the material theory of heat. He introduced clockwork into a receiver, and, having removed the air as completely as is possible, by both mechanical and chemical means—that is, having made a vacuum as perfect as it is possible to make it—he set the machinery going, and, by its friction, generated heat, and melted ice. And not only that, but, in point-blank contradiction to what our correspondent affirms, the amount of heat was in exact proportion to the mechanical force exerted in producing friction. The writer’s attempt to *prove* that the cause of heat is the union of oxygen and hydrogen is a beautiful case of logic independent of facts. Oxygen and hydrogen will produce heat by combination, and so will chlorine and carbon, and so does all chemical action. Mechanical action, as friction, compression, and percussion, is also a source of heat. These are elementary facts known to every schoolboy, and to talk about “all the heat in the universe” being due to oxygen and hydrogen is nonsense. Professor Tyndall has shown that heat-rays are arrested by watery vapor in the air; and so they are by twenty other vapors—probably by all which have complex molecules. But what has that to do with the nature or universal production of heat? We should certainly not have referred to this new theory of heat on the ground of its claims to the reader’s attention, but it has interest as an example of a great deal of crude and childish speculation by those who are ignorant of the rudiments of the subjects they discuss. To correspondents of this quality we would say that, when a writer begins by discrediting all that the past has established, his article goes straight to the waste-basket.

#### TABLE-TALK.

A WRITER in *Temple Bar* attempts to make a contribution to the much-discussed art of conversation, but scarcely succeeds in adding any thing to our knowledge of this subject. He entitles his essay, “How to Talk,” but leaves the art of talking quite as much in the dark as ever. His paper is agreeable, discursive, but altogether inconsequent. Conversation, when elevated to an art, has laws too delicate for classification or statement, and, the best the critics can do is, to deplore the general want of proficiency in an art which every one attempts to practise. Who can formulate the tact, the insight, the readiness, the apprehension, the genial quality, which make good talking? The *Temple-Bar* writer, while failing to supply any new helps to this most desired and perhaps best appreciated of the arts, gives a few hints worth heeding. He thinks that argument, although so often deprecated, when conducted rather as a discussion than a disputation, and the passions not too deeply engaged, is a good stimulant to talk, and often a great satisfaction to the host, who thereby finds himself relieved from the necessity of making conversation. Silence, our writer thinks, is not golden, in despite of the proverb, and quotes, as proof that talk is the only test of men’s physiological pretensions, Coleridge’s story of the silent man with a large forehead, who seemed the incarnation of wisdom, till he burst

into a rapturous cry at the sight of apple-dumplings. "Speak, that I may see thee," is the best corrective of the hasty judgment of sight. The essayist makes a good point or two on the custom of arguing by illustration. Similes are often the most successful weapons of a talker, convincing more swiftly in argument, and enlivening more happily in lighter talk, than almost any other means—and yet they are commonly false or unjust. Parallels, the writer might have shown us, do not exist; and, however much the mind may be captivated by resemblances, a just analysis will usually show that we have been amused by a false glitter. Two instances of this are given—the first, the well-known discussion between Goldsmith and Boswell as to the conversational talents of Burke and Johnson. Goldsmith said that Burke, unlike Johnson, wound into his subject like a serpent. "But Johnson," returned Boswell, triumphantly, "is the Hercules who strangled serpents in his cradle." Here the only connection between the two sentences is the word "serpent." Had Goldsmith called Burke "a serpent," Boswell's reply would have been apposite; but the intimation that Burke glided into a subject with the dexterous sinuosity of a serpent has no real connection with strangling those vipers. Boswell's rejoinder sounds triumphant, because it assumes a parallel that does not exist. The other case is the story of a hunting parson, who was remonstrated with by his bishop, and, wishing to turn the tables on his diocesan, replied that he did not think hunting as bad as going to balls. "Oh," said the bishop, "I suppose you allude to my having been at the queen's ball; but I assure you I was never once in the same room as the dancers." "My lord," answered the parson, "my mare is getting old, like myself, and, for many reasons, I have never once been in the same field as the hounds." The parson here evidently thinks his retort triumphant; but it will be observed, setting aside the question whether hunting and dancing are equally unclerical, that the parson's illustration is not a parallel. People may go to a ball for reasons independent of dancing, but do not follow the hounds if they are not hunting. "If you are not in the same room as the dancers, you are not taking part in the ball; but, if you are following the hounds, whether you are close upon them, or five-and-twenty minutes behind, you are equally taking part in the hunting." Talk, however, can scarcely submit to this close analysis; and the most brilliant conversationalist would find his wings clipped and the *afflatus* gone, were he certain that every happy hit was to be remorselessly brought to the dissecting-knife in this way.

— But in the art of talking there is included manner as well as matter. Apart from that subtler and rarer skill which invests nothings with a peculiar grace, and gives to the most trifling sentences an accent, a tone, an indescribable quality, that render them fascinating, there is a more attainable art in delivery, a something to which ordinary mortals can aspire, and which ordinary mortals do not commonly possess. Good accent is, of course, a primary necessity in pleasing delivery—accent not so pronounced as to be manneristic, and given with a fine quality of tone, so that, while the meaning of the sentence is clearly and distinctly chiselled, it comes tingling with pleasurable intonations. Low, smooth, easy, fluent, but not rapid speech, uttered "trippingly" on the tongue, without strain or effort, never loud, never sharp, never coarsely emphatic, with no affected drawl or lisping senility, but manly, with a quiet, subdued earnestness—these are essential qualities of delivery for good talking. And then there should be but little gesture. We once heard Fitz-Greene Hallock say that English sentences have no need of gesture, while with French it is indispensable. Half a Frenchman's meaning is in his gesticulation; he talks with his head, with his shoulders, with his elbows, with his hands—with his whole body. But English, it was the poet's opinion, has its sole value in emphasis; the voice can do all the work. When Macready was in this country, he gave a reading of "Hamlet," which was specially notable for the almost entire absence of gesture. He simply leaned upon a desk before him, and, in a dreamy, wrapt way, let his emphasis enforce the meaning. In all our public speakers there is a great and often painful excess of gesture. They all saw the air more or less. Where gesture springs naturally from the temperament of the speaker, it is well enough; but, whenever studied, whenever deliberated, whenever following a rule, whether this is on the pulpit, on the stage, on the platform, or in the parlor, it is not within the scope of refined art. Pleasant talkers will use their hands but little; their skill will consist of an utterance in which the quiet and simple, but yet finished manner, will almost transcend the interest of the matter.

— Pertinent to our remarks at length, elsewhere, on "Literary Immorality," is a sharp attack in a recent number of the London *Saturday Review* on Boucicault's dramas. Atrocious as "Formosa" may be considered in bringing a successful woman of the *demi-monde* on the stage, the *Review* thinks that others of Boucicault's plays, in their utterly imbecile scenes and characters, have done quite as much injury in the corruption of public taste. Says the *Review*:

"For some years past he [Boucicault] has been steadily corrupting whatever little theatrical taste was left; he does but add a little French sauce to the somewhat highly-seasoned fare which he had previously provided for his audience, when a portion of the public at once turns squeamish and falls on its host. We know of few harder louts than this, and we are not surprised that Mr. Boucicault has been a little wanting in patience. Hitherto each of his successive violations of the laws of good sense and dramatic taste has been greeted with larger audiences and with redoubled applause; but, now that he proceeds to put the last touch to his imperfect work, and, having like Nature tried his 'prentice hand on man, goes on to make that chaste lass *Formosa*, the audience, if still as large, is yet divided, and the applause comes mingled with not a few upbraidings. It is too bad for those who shed tears over his 'Colleen Bawn' to howl down his 'Formosa.' A successful harlot is, no doubt, a shocking sight to an ordinary Briton; but we would ourselves, for our part, as soon see twenty successful harlots on the stage as the maudlin sentiment, the monstrous sensational scenes, the leaps down precipices, the 'headers' into lakes, the railway engines, and the Hansom cabs, that disgrace our modern theatre. We are told that no virtuous woman could see 'Formosa' without blushing. We wonder how any man can see 'Formosa,' or any another piece of the modern drama, without blushing for very shame, not merely that he is present to listen to such balderdash, but that such balderdash should have been composed by a fellow-man, and could attract an audience of his fellow-men. Let us be as severe as we like about the open violation of decency, but let us remember that the open violation of all common-sense and good taste is almost as much the sure mark of a fool."

— Some time since we referred to the various eccentric forms which the novel in its brief history has assumed, and hoped that the late encyclopedic manifestation, which is the most astonishing of all, would not come again to vex our souls and disturb our dictionaries. This hope has not been realized. A new novel, from the learned author of "St. Elmo," has just come from the press, arrayed in as many glittering fragments of erudition as its predecessor. The heroine of the story is a girl of sixteen, who was picked up at the poor-house, adopted, at the age of twelve, by a rich family, and who, consequently, has been without even ordinary opportunities for instruction. But these facts seem to supply to the author of "St. Elmo" all the requisite conditions for culture; and, of course, the student of the erudite novel is not surprised to find a heroine, so circumstanced, flinging irate learning at the heads of all she meets. In her very first sentences, she talks about Penelope, Gretchen, the Grand Lama of Larissa, and the idol Bhadrinath; and soon hopelessly stumps all poor wretches who are not accomplished encyclopedists. What wonder, for instance, must fill the unsophisticated breast at hearing a young lady declare that she "would rather spend her days in watching the gorgeous pageant of the *Panathenæa*, or chanting dithyrambs to increase a fine vintage, or even offering a *Taigheim*, than in running neck and neck with Lucifer for the kingdom of heaven!" Ordinarily, a style like this would send the speaker to a lunatic asylum; but, in a popular novel, it is seemingly considered very brilliant.

— We were told a few months since that at last New York was assuredly to be accommodated with a thorough cab system; that three hundred cabs for immediate use had been contracted for in England; that the company organized for the purpose had money and pluck, and were not to be bought off by the car or livery stable interests, as had previously been the case with every organization of the kind. So we hoped, and tried to believe. But now comes the news that the cab company have been bought and sold. We are to have no cabs, after all. It is not complimentary to our civilization that so simple a thing as having a few cabs must be stopped by the cumbersome contrivances of law. Why should not any man run cabs, carriages, omnibuses, or public vehicles, where he lists? They should be subject, of course, to general regulations, and taxed; but there is no reason, that we can conceive of, why a cab company should require a special character. It seems difficult for people to understand that the only way to escape misgovernment is to limit the uses of government. But, instead



of understanding this, for every thing that goes wrong we cry out, "Change our rulers!" We shall never be better off by exchanging King John for King Richard. Corruption and circumlocution are the natural efflorescence of politics; reform cannot come by change of masters, but by change of laws. Exclude from the dominion of government every thing not imperatively necessary—and what are necessary are simply regulations of police—and we shall thus drain the sinks that breed our political pestilences. We must change our methods, not our masters. "Methods," says Talleyrand, "are masters of the masters."

— We have but recently made our readers acquainted with the life and philanthropic doings of Mr. George Peabody, who has since been removed from the scene of his earthly labors. We can hardly help thinking that there is a serious significance in the honors paid to his memory by the leading nations of two continents. He was not a warrior, or statesman, or author, or philosopher, and fell into none of the categories of greatness which the world in past times has been delighted to applaud. He gave his life quietly to the accumulation of wealth, and then he gave the wealth, with great discretion, for the benefit of those who needed it. It was a simple act, but so grandly and nobly done as to call forth the unaffected gratitude and the sincere admiration of whole nationalities. Such an act as Mr. Peabody's is not only valuable for its positive and direct beneficence, but it is valuable also, and perhaps in a still higher degree, as a stern rebuke to that selfish passion for accumulation and the spending of fortunes for mere display, which is the prevailing practice. We believe, with Mr. Lecky, in the progress of morals, and that the action and example of Mr. Peabody illustrate it. The royal honors that were paid to his memory in England—the funeral in Westminster Abbey—the highest posthumous dignity to which noble Englishmen aspire, attest a higher appreciation of pure moral merit than any former age has ever paralleled.

### Miscellaneous.

THE Great Political Cheshire Cheese has so nearly passed out of the memory of men, that we doubt if many of the present generation have even heard of the existence of this extraordinary instance of political enthusiasm. Mr. Elihu Burritt has recently revived its history, from which we condense the following account: In the presidential campaign preceding the election of Thomas Jefferson, the father of Democracy, party spirit ran high, and the Federalists were unsparing in their denunciations of Jefferson. The parsons of New England, especially of Massachusetts, entered the arena, and turning their pulpits into hustings, waged war upon a religious basis, denouncing Jefferson as an infidel, and placing him upon the same platform with Voltaire and the other apostles of atheism. In Cheshire, Mass., however, a divine was found who took up the cudgels against the intolerant bigots by whom he was surrounded. This was Elder John Leland, a plain, unassuming man, but one of the most effective preachers of his day. He bent all his energy and mental power to the support of his own views, and had the satisfaction of winning to the side of Jefferson every member of his congregation, as well as many others; in fact, Cheshire to a man followed his lead. After the election of Mr. Jefferson, Elder Leland conceived an original plan for announcing to the world the principles of Cheshire, and one Sunday proposed to his congregation that, on a given day, each man and woman in the town who owned a cow should bring every quart of milk given on that day, or all the curd it would make, to a great cider-mill owned by Captain John Brown, the first man who detected and denounced the treason of Benedict Arnold, for the purpose of manufacturing a mammoth cheese as a present to the President. The idea was received with enthusiasm, and, on the day appointed, the sun shining brightly, and every thing propitious, the whole population of the township, men, women, and children, on foot, in carriages, wagons, and ox-carts, assembled at the great cider-press, each bringing his or her contribution. The press had been prepared for the occasion, and upon the bed had been placed a huge hoop to serve as a cheese-box. Into this was poured the milk, and, when the last contribution had been given in, a committee of the most experienced matrons of the town attended to the delicate task of mixing, flavoring, and tinting the largest mass of curd the world had then seen. This done, the ponderous machinery was put in motion, the young men seized the levers, the screws were turned to the limit of their power, and the work was accomplished. Elder Leland then closed the exercises by imploring the blessing of Heaven upon the undertaking, after which he said: "Let us further worship God in a hymn suitable to this interesting occasion." The hymn "lined out" by the elder was sung to the tune of *Mear*, and the crowd quietly dispersed. When the cheese was thoroughly

dried and ready for use, it weighed sixteen hundred pounds, and could not safely be transported on a wagon. It was not until midwinter that it was possible to move it, when, taking advantage of a heavy fall of snow, it was placed upon a sledge, and Elder Leland, taking the reins, drove all the way to Washington, a distance of five hundred miles, which he accomplished in three weeks. On arriving in Washington the elder drove at once to the White House, and presented his people's gift to the President in a characteristic speech. The President responded with deep and earnest feeling to this remarkable gift, coming from the heart of a New-England population; receiving it as a token of his fidelity to the equal and inalienable rights of individual men and States. At the close of the speech, the steward of the President cut out a deep and golden wedge in the presence of Mr. Jefferson, the heads of the departments, foreign ministers, and many other eminent personages. It was of a beautiful annatto color, a little variegated in its appearance, owing to the great variety of curds composing it; and, as it was served up to the company with bread, all complimented it for its richness, flavor, and color. It may be interesting to add here that, in 1862, a cheese weighing four thousand pounds was made, from the milk of fifteen hundred cows, by the Steele Brothers, of California (formerly of Delaware County, N. Y., and brothers of General Steele, of the Union Army). The cheese was exhibited in San Francisco, for the benefit of the Sanitary Commission, realizing thereby several thousand dollars, and was then cut up and sold at a dollar (in gold) per pound.

We are happy to be able to inform the numerous readers and students of Herbert Spencer that his "System of Philosophy" is making steady and satisfactory progress, notwithstanding its author's disturbed and uncertain health. The third department of the work—The Principles of Psychology—is already well advanced. A few months since, the first instalment of it—The Data of Psychology—was republished in this country. In a few weeks, Part II.—The Inductions of Psychology—will be ready for the public. Of this work it may be said that it is not only a new and important contribution to the science of mind, but it is also a most original work, and will go far toward the establishment of a new philosophy of the subject.

"It appears," says the *Charivari*, "that the French Government entertains the intention of proposing again to the other cabinets of Europe a general disarmament. This proposition, which comes up for the hundredth time, at least, has now some chances of success, for it will make us all laugh. Now, when we laugh, we are disarmed." To fathom the melancholy of this wit, we should know that the policy of a general restoration of the armies of Europe to the needs of its soil and of its arts has no more earnest champion than the very sheet which now confesses the idea so impracticable as to be absurd. What a comment on the famous "balance of powers" in Europe, and the bloodthirsty exigencies of its rulers!

The late Sainte-Beuve used to tell the following little story: A married lady friend asked his counsel upon the means of obtaining a separation from her husband, and was admonished by him of the necessity of producing blows, corporal violence, or outrageous insults. One morning, the lady called on him, quite radiant, saying, "My husband has slapped me; I'm so glad of it!" "Were there any witnesses present?" "Why, no." "Ah! then," said Sainte-Beuve, "it must all be done over again." Great vexation of the lady, who returned like a fury to the conjugal domicile, and applied upon her husband's face as smart a slap as ever made cheeks tingle, saying, "Here, sir, take your box; it's good for nothing to me, and I give it back to you."

We find, in a French journal, the following dialogue between two married ladies: "My dear, the first months after my wedding, I was on my knees before my husband from morning to evening. It was a perpetual adoration, an incessant delirium, an inexpressible felicity. I overwhelmed him with caresses. I think I could have eaten him." "And now?" "Now, I am right sorry I didn't."

A chemist of Bar-le-Duc, in France, has just invented a convenient way of petrifying bodies, and thus proposes to solve the troublesome problem of the cemeteries. Every one may now, with perfect safety to the public health, become his own monument and stand guard over his tomb.

### Foreign Scientific Notes.

AN eminent botanist, Alphonse de Candolle, in his studies of "Botanical Geography," from which we collate certain passages, infers from his numerous observations that the vulgar and most common among plants are continually invading the spheres of the rarer plants, conquering these local territories, and possessing them, to the exclusion of the natives. "Plants common to different countries are on the increase, while each local flora is dwindling away, and its sites lose their primi-

tive characters. Plants of the roadsides and of cultivated grounds characterize our epoch, while woodland and mountain plants are more and more restricted. These belong to an older order; they make way for a new one. To the former, or wild, state, in which the seal of originality was impressed on every plant, succeeds a vegetable populace, more crowded, but less varied, in which all tend to resemble each other." Agassiz wrote, in 1847: "Our European plants (about sixty in number, of which many are pestilent weeds) have invaded America, and made the American plants disappear in the same manner and proportion as the white race causes the Indian to disappear."

According to a statement read before the Prefect of the Department of the Seine, France, in the name of the members of the Board of Health, it appears that, in all the visitations of cholera in France, workers in copper, from some reason or other, have enjoyed almost perfect immunity from the ravages of this pestilence and other epidemics. A table of comparisons, carefully prepared, proves clearly that the losses sustained by them were ten, twenty, thirty, and forty times less than those inflicted upon the members of the four next-largest professions. The Society of Bon-Accord, founded in 1819, composed exclusively of copper and bronze turners, fitters, and chisellers, in an interesting report of their operations during the five cholera-invasions of 1832, 1849, 1853, 1854, 1865, and 1866, state that in all those years they only lost one single member from this particular form of disease. Several of the most eminent members of the medical profession in Paris, struck by those results, are studying the question with the intention of determining the measure and form in which copper might with advantage be advised and prescribed as a preventive against cholera, in which it is to be hoped they will be successful.

Much warmth of discussion has been expended, during the past few weeks, in medical circles in France, in consequence of a few lines published by Dr. Nélaton in one of the organs of the faculty. "I am rejoiced," he wrote, "to see that the generation coming after me renounces the false semblance of an exact and profound science to adhering to the study of clinical surgery." It is needless to observe that the learned surgeon's assertion is not well founded, the young generation never having dreamed of abandoning the microscope; and, instead of positively affirming that such was the state of things, M. Nélaton ought to have said that such was his desire. The gauntlet, however, was at once taken up by a young champion of the dissecting-room; and the debate, besides being remarkable in itself, will, it is hoped, lead to reformations of some moment in surgical science.

M. Robert Houdin, *aka*, has invented a new class of timepieces, remarkable for their elegance of form and simplicity of construction. He has applied "remontoirs" to the springs and striking apparatus, on the same principle as those in use for watches; so that the owner of one of them neither requires to open its dial nor to interfere in any way with its internal mechanism, both the works and striking apparatus being set in motion and regulated from the outside. From an artistic point of view, timepieces furnished with remontoirs possess the advantage of not having the dial pierced with holes, which considerably mar the decorative effect, and, besides, present the inconvenience of limiting, for certain models, the calibre, or size, of the wheel-work, in order to prevent the holes from falling upon the figures of the dial.

General Morin stated at the last meeting of the Agricultural Society at Paris that he had in his possession a number of wooden exhausting wheels that had been used in copper-mines for fifteen hundred years, one of them bearing an inscription, upon a bronze plate, indicating that certain repairs had been made upon them in the year 315 of our era. These mines, situated upon the frontiers of France and Spain, are worked by the sons of the Duc Decazes. The wheels in question are about six yards in diameter, the wood composing them is in a perfect state of preservation, and the analysis made demonstrates the presence of oxide compounds of copper in the same proportion as in the process of wood injections invented by Dr. Boucherie.

Mr. Thomson's highway-locomotive, which lately figured at the Highland and Agricultural Society's show, at Edinburgh, has just been the object of some interesting experiments. A double-furrow plough having been attached to it, the driver went through all the movements, as desired, with the greatest facility. After being supplied with water and coal, it returned to the field of operations, and proceeded up an ascent with an incline of one foot per four and a half feet. As a last test, two of Fowler's double-furrow ploughs were fixed to it, with which it turned up the soil to a good depth, ploughing up-hill and down-hill in the most satisfactory manner, and with the greatest ease.

The secretary of the Academy of Science exhibited before the members a collection of beautiful crystals of silver amalgam, accidentally produced in the studio of M. Ernest Dumas, at the Mint. These crystals contain 27 parts of silver and 72.6 parts of mercury, which nearly approaches the composition found by M. Cordier for a natural specimen

originally found in Bavaria. The relative proportions of those constituent metals, as is well known, are extremely variable, while the form of crystals remains unchanged, both mercury and silver being isomorphous.

M. V. Marchand, in an interesting publication just issued in France, proposes to destroy the subterranean grub so fatal to vine-roots by means of sulphhydric gas. In the first place, this gas is fatal to every form of animal life, while, in the second, it is harmless to vegetable life, being itself one of the aliments of plants. To accomplish the end he has in view, M. V. Marchand proposes to water the roots of vines blighted by the underground grub with a solution of manure saturated with the gas in question.

M. Pollack, of Bautzen, in Saxony, has for some time used a paste, made of pure oxide of lead and concentrated glycerine, as a cement for both stone and iron work. This mixture is insoluble in acids, hardens quickly, and is not influenced by heat. When used for joining stones, and properly hardened, it is more easy to break the solid stone than to separate the parts thus cemented.

## The Museum.

A BOTTLE-CONJURER announced in London that he would jump into a quart bottle at the Haymarket Theatre. Ten thousand persons were found who believed that he could do it, and came together to gain admittance, and witness the miracle. He tried, but *couldn't*, and the believing audience were so enraged because he did not jump into the bottle, that they nearly pulled the house down in their indignation.

About 1665 a method was contrived by Mr. Hook for sea-soundings without the aid of a line. The instrument consisted of two balls, one of light wood, the other of stone or iron, so linked together that as soon as the heavy ball should touch the bottom the wooden one should get detached and of course rise to the surface. From the time that elapsed between the disappearance of both balls and the reappearance of the wooden one, the depth was calculated.

In animals, as birds, which pounce or descend upon their prey, the pupil of the eye is elongated *perpendicularly*, so as to give vertical sweep to the vision; but, in those animals that ruminate, as the ox, the pupil is elongated *horizontally*, so that the eye may take in a wide lateral sweep of objects—in both cases the powers of the eye being adapted to the requirements of the creature.

A practical botanist will distinguish, at the first glance, plants of different quarters of the globe, and yet will be at a loss to tell by what mark he detects them. There is, I know not why, a sinister, dry, obscure look in African plants; superb and elevated in the Asiatic; smooth and cheerful in the American; stunted and indurated in the Alpine.—LINNÆUS.

Whether anybody has ever seen it or not, everybody has heard of the sea-serpent, and supposed it to be a horrible monster many rods long, which goes undulating through the ocean at a frightful rate of speed. So everybody may have heard of the sea-horse, and to most people the idea called up is, no doubt, that of some huge watery brute, half-fish and half-horse, that can make better time in the ocean than Dexter can on land.

But this is an exaggeration. The sea-horse is a curious little creature three or four inches long, which forms one of the most interesting objects of the aquarium. The Rev. Samuel Lockwood, of Keyport, N. J., has furnished a very instructive account of it to the *Salem Naturalist*, and thus pictures its appearance:

"The sea-horse, when taken fresh from his native home, though almost laughably grotesque, is a very pretty creature. Its general color is ashen gray; at first glance, an exceedingly sober suit. But, if examined more closely, it will be found thickly studded with tiny spangles of metallic silver. Add to this its rich armature of daintily-carved plates, like a coat-of-mail, its body always partly erect, and bent forward, it looks like the steed of a knight-errant in quest of adventure; and those pretty, golden, yet queer little eyes, chameleon-like, independent of each other, intently gaze two ways at once. Then as to that dorsal fin, in oddity and beauty it has no compeer among its ichthyic rivals, so tastily fringed with a neat border of delicate yellow, precisely like the yellow tipping of the tail of the cedar-bird. In nature it is an exquisite fan, in form, size, and ornament, worthy the hand of Queen Mab."

But the curious thing about the sea-horse is the very remarkable constitution of its family; and in these times when, Heaven only knows what will turn up next in the social world, it is well to be familiar with all of Nature's odd ways of managing these matters. It is well known that the female opossum and kangaroo have little pouches in which their offspring make it their home in the nursing period of infancy.

Now the sea-horse has the same trait, but the office is reversed; it is the father that has the pouch and carries the young. Mr. Lockwood, who has carefully investigated its conditions of reproduction, says that the female simply consigns her eggs to the embryonal sack of the male, and then retires from all further care or responsibility in the matter; the male henceforth assuming the duties of both father and mother to the progeny. "The male sea-horse not only hatches the eggs in the embryonal pouch, but also feeds the young, by allowing them to absorb a portion of himself. At the time of receiving the spawn the wall of the pouch is not less than three lines thick, and is well stored internally with fat. At the time of expulsion of the developed fry, the same sack is not half a line thick, and hangs flaccid on the animal, a mere thin membrane."

How the father managed the somewhat awkward business of bringing his wife's children into the world is interestingly described by Mr. Lockwood:

"To-day, near noon, I observed three young sea-horses swimming about. They had just made their *début*. Very minute creatures they were, but nearly perfect. From that hour the *pater-mater* kept busy



The Sea-horse.

Father of the Family turning adrift his Baby Collis.

setting his progeny adrift. At the bottom of the vessel was a broken wrinkle-shell, put there for the attachment of the animal's tail, when fatigued by swimming, as the sea-horse is very easily tired, and this, monkey-like, is its favorite mode of taking rest. The wrinkle-shell afforded real help in the labor of extruding the young, which is in no sense a parturient process, but on the contrary is entirely mechanical, and in the present case was effected in the following manner: With its abdomen turned toward the shell, its tail attached to the under part of it, the body erected to its full height, the animal, by a contractile exertion of the proper muscles, would draw itself downward, and against the shell, thus rubbing the pouch upward, and in this simple, yet effective way, expelled the fry at the opening on the top of the sack, as shown in the figure."

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Seem to illustrate in all branches of their business their faith in the old Scriptural saying, "Cleanliness is next to godliness." For sixty years the Morgans, father and sons, have been engaged in the manufacture of Soaps of various kinds, at their present place of business, No. 211 Washington Street, New York City. Not content, however, with furnishing Soaps for toilet and laundry purposes, they have invented and produced

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### AWAY

all these articles as worthless, when they once become familiar with the advantages possessed by Sapolio. Machinists, engineers, and others, who feel a pride in the appearance of their engines, etc., will find Sapolio the very best polisher for iron, steel, and other metals, they have ever used. Neatness, cleanliness, and economy of time and labor, are the characteristics of this new and invaluable compound. In all the departments of domestic economy, no other article will be found more convenient and useful.

On the whole, Mr. Lockwood views the sea-horse philosophically as an eclectic creature, entitled to much respect. He says: "Thus our sea-horse, though anomalous in form and habit, has beauty united with its strange features, and grace with its eccentricity. In fine, as we look at his equine appearance, and think of his monkey faculty, and his opossum traits, and that queer blending of innocent oddity with patriarchal dignity, we have to accept the old fisherman's proverb—'There is nothing on the land that is not in the sea.'"

The quantity of iron in the blood is but small, varying in different individuals and different states of the same individual; those who are of what is called the sanguine temperament have more than those of the lymphatic temperament; those who are well-fed have more than those who are ill-fed. It is in almost all our animal and vegetable food, so that we do not habitually need to seek it; but the physician often has to prescribe it, either in the form of "steel wine," or in that of chalybeate waters.

The Tartars, out of a religious principle, waged a long and bloody war with the Persians, declaring them to be infidels because they would not cut their beards after the rites of Tartary.—HAYDEN.

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**EXTRAORDINARY BARGAINS**

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Fine Wool Under Vests,  
Fine Wool Drawers,  
Scarlet Cashmere Vests,  
Fine Cardigan Jackets,  
Balmoral Stockings,  
Kid and Buck Gloves,  
Castor and Cloth Gloves,  
Roman Scarfs and Sashes.**For Misses.**Patent Merino Vests,  
Patent Merino Drawers,  
Patent Merino Stockings,  
Scarlet Cashmere Stockings,  
Black Cashmere Stockings,  
Kid and Buck Gloves,  
Cloth and Castor Gloves,  
Fine Cardigan Jackets,  
Fleecy Cotton Hosiery,  
Roman Scarfs and Sashes.**637 BROADWAY.****DAVIS COLLAMORE & CO.**

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**Dinner Sets, Tea Sets,  
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Five Doors below Eighth Street.

STORE RUNS THROUGH TO MERCER.

**CACHEMIRE D'AMERIQUE:  
AMERICAN SILK.**We would announce that, having made arrangements with the *Manufacturers* for the *exclusive* retail sale of  
the Cache-mire D'Amerique, it will be at once placed on our counters at \$4 per yard. This Silk, although but re-  
cently placed upon the market (and then at a higher price), has already become popular through its real excel-  
lence. We unhesitatingly recommend it, and respectfully request an examination of it by our patrons and the  
public generally.

As other qualities issue from the factory, they will be found immediately in our stock.

**LORD & TAYLOR,**

Nos. 461, 463, 465 &amp; 467 BROADWAY, corner of Grand St.

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